

5L-8Q

5L

Stringyloaster on Pteris (cf 3R) Hd. 2.2 ± Pale  
testaceous, a brownish tint on vertex, eye black  
a neat rounded black patch in summit  
of each lobe separated by rather wide  
in space; a tiny black spot on first edge  
of hd. in line with eye; face immaculate  
mouth brown. Waxy annulate dorsum  
green, s-v & feet translucent white with  
a yellowish tinge; no marks; the feet  
clear last 2 joints black marked. Spir-  
acles dark. Faint trace of blackish s-d  
marks on 13. Another spots on hd. not  
very small, lateral absent; otherwise same

later saw lateral spots hidden in neck fold  
Another hd 1.4 ± picked out of the 3R which it was found  
like. Tiny brown spots in vertex of lobes; otherwise  
same as 5L but a little more uniform. D. & s-v are  
more contrasted than 3R (Sh hd 1.0)

[Egg more like 3R. Long cylindrical, rounded at the ends.  
11-12 cells, transparent. Shiny, a white patch  
eccentrically placed (embryo?) 1.1 x .4 mm -  
juv. two went down to base

One shed and turned to 3RA s-v]  
Differ from 3R in when dots on head several present  
to none others yellow tint and legs even color  
all others, not translucent green like 3R

5M

Like 4C but body green instead of ochre.  
 Hd ochreous with an orange shade over apex  
 eye black, mouth brown, shining, w 2.2mm  
 legs flat 6-annulate, smooth, not shiny  
 ground glass pale green, varying a little  
 towards whitish; in marks, d vessel dark  
 reddish, its edges defined but not  
 forming a band, the green a little streaked  
 longitudinally s-d. Tho. feet moderate,  
 clear, abd. rather small 6-13. Tracheal  
 line white but not prominent. Found  
 with 4C by sweeping grass Jefferson Highlands  
 U.H. June 17 '95 but rare only 1/2 dozen.  
 Stage hd 2.5± (next) Face whitish, vertex testaceous, a broad  
 curved blackish brown band joins the eyes over D. A cloud  
 in  $\Delta$  and on back of head at vertex, eye & sutures around  
 antennae black, mouth brown. Body all green, almost  
 emerald green 6-annulate, a little granular under  
 lens in marks. d vessel dark, tracheal line  
 whitish; tho. feet clear. s-v microlarva with dorsum

5N

On grass Jeff. Highlands, U.H. June 17 1895. Feet  
 6-11 small or 13. Hd pale testaceous, brownish  
 over vertex, eye black; w. Body pale green  
 6-annulate, minute black setae on 2<sup>d</sup> & 4<sup>th</sup>  
 annulets s-v fold; a broad s-d blackish shade  
 defined laterally, diffuse above and shading  
 into dorsal area, leaving tubercles pale; 2  
 ant and anal plate pale; s-v faintly shaded  
 with blackish along the fold; s-d shades  
 with star horn in oblique light in folds.  
 Feet clear, a fine brown line on basal joint

[Faint handwritten notes at the bottom of the page]

50

On grass Jeff. High., N.H. June 17, 1895. Like 5M  
and 4C but grayd. and white substantially  
Hd large, polished, lower half whitish, upper  
half or only the sides of the vertical patch  
blackish gray, eye black. Feet 6-13, segs  
7-annulate for the most part or 6-annulate. Dorsum  
to spiracles silvery or brownish gray, an  
obscure white stig line. 2 ant, 13 post and  
all s-r and feet whitish, s-r folds some-  
times narrowly brown marked. The feet clear  
with an oblique brown mark at base  
basal shade darkest laterally; d-vein a dark  
band. (A  $\frac{1}{2}$  of hd dark, dark shades on s-r folds;  
brownish gray) Body a geminate dusky patch above  
eye on each lobe, body silver gray, s-r white  
Another A dorsum silver gray, pale d, as dark  
edge from a band. A B acquired the row of gray  
spots along s-r folds, but hd still pale at apex.  
a B (hd 1.9) shed and became A (hd 2.5)  
2 went down without occasion eating. Hds too large for body

5P

On grass Jeff. High., N.H. June 21, 1895. Marked  
very like 5H but feet 6-12, 13. Hd pale  
testaceous, a little shapeless, an orange  
tint toward vertex and a black patch at  
vertex of each lobe; eye black, mouth brown.  
w. 1.8 mm + thorax a little enlarged; body  
shining, 6-annulate, ann. 5 & 6 very small  
D. obscure green, vessel not contrasting  
its edge obscure; rounded by a stig white  
band s-r pale, whitish, a honey tinge on  
feet and black shades at base of the  
feet. Anal plate pale, with blackish shade  
at the sides. 2 ant slightly pale  
formed a cell at bottom of can under  
ground strengthened with piece of wood  
noted off a chip &

5Q

Very like preceding but hd. all black above  
 On grass, June 21. Hd whitish all of vertex  
 black reaching down broadly ending in a  
 point on eye, <sup>& running back to occiput</sup> but indented at the side  
 by a point of ground color;  $\Delta$  black, separated  
 by a narrow curved band of ground color from  
 apical patch. Body olivaceous greenish to  
 white stig. line, cordid & translucent  
 Edges of d. vessel thick, showing cordid  
 white but not very evident. Feet 6-13  
 s-v cordid honey yellowish. The feet pale  
 marked with black on joints, 2 marks on  
 basal joint. Hd 1.8 mm  $\pm$  not Hd 2.0 Same  
 shiny cordid olivaceous a broad blackish  
 sd shade showing tarry brown in fold.  
 D. vessel a dark shade, a yellowish  
 tinge. Died

5R

a green of sweep of grass or weeds, did not eat  
 Jefferson bylands June 20. Higher than wide,  
 thick, uniform, neatly 6 annulate. Hd. pale  
 with a blackish tinge, eye black. Body uniform  
 emerald-brisk green, no marks at all  
 all the annulets nearly lined with smoky  
 blackish over the dorsum. The feet rather  
 small clear. Shape suggest *Monophedum*  
 Probably in ground stage: foot placed unknown  
 Hd 1.5  $\pm$  Sh hd 1.4 Larva was uniform green with  
 not the dusky bands (recollection) Sh hd with  
 a testaceous tinge, eye black with a dusky  
 shade behind it.

"*Monophedum* or sp. near *atratus* Harg"  
 Mac G.

5 S

Oct 3 1896

On Azalea, Jefferson High<sup>ts</sup>, N.H. June 23 1895.

Edge eaters, solitary, feet 6-11, faint on 13 eating the young leaves.

Hd pale green finely brown dotted all over except a narrow space underlying brown clypeus, eye black, w. 1.2 Sep. faintly irregularly 5-annulate shiny green, d. vessel dark tracheal line evident, no marks except little dusky rings s-v. defining the obsolete tubercles which can just be distinguished with lens though perfectly concolorous. Anal pump very short, remote, fringed black tipped. Setae very fine and short. Tho. feet clean with brown claws.

Became streaked with dusky blackish on the annulet, bringing out the tubercles more distinctly, even dorsal ones; antennae present

Orange March 22 1896

Azalea n. sp. Marlott

molt July 18 Hd pale whitish eye black, a dark dusky shade at vertex. Body annulate, shiny, concolorous green, no marks. Trace of fat ed line as a continuous yellowish shade (lens) but does not effect appearance (ground)

5 T

Crawls spirally on back of leaf of Spiraea salicifolia Jeff. H., N.H. June 23 1895 (thought = 30 but feet 6-13)

Hd with 2 grooves before vertex, forming an X-work with clypeal antenna in front view, brownish pale below, eye in black spot. w. <sup>(see head 1.3)</sup> 1.2 Sep. 6-annulate, scarce shiny, pale brown yellow feet showing green & giving a green appearance; no marks, tracheal line obscure. Tho. feet clean, brownish tinged, moderate.

Body of nearly uniform width, rather square just. <sup>(see head 1.6)</sup> molt June 23 Hd 1.3. pale, vertex all orange brown dotted. Same. Coiled with tail up.

Later a row ed of yellow fat granules, rather irregularly scattered but a continuous line

molt July 6 Hd 2. pale a cloudy light orange brown shade on vertex nearly to black eyes. Body strongly

7-annulate, yellowish green with centurion yellow s-d narrow fat line, below it a darker shade

being concolorous with d. from foot contrasting s-v. feet clean brown claws. No points seen. Late fat line absent or thin, a little patchy, diffuse yellow. Larva all quite yellowish

5U = 3H

Identical with 3B but larger on Populus tremuloides, Jefferson Highlands, N.H., June 24 1895 -  
Edge eater, sitting leaf, feet 6-11, anal groups pointed, black tipped. Hd 1.7 mm pale green, brown dotted, a blackish stripe in  $\Delta$  and median suture, another up from eye, curving back to join faint sd shade on 2-3 eye black without spot, mouth brown. Body leaf green, slightly shiny, not annulate but slightly creased a single 1st annulet well folded. The feet clean, tracheal line evident, narrow, spiracles & d-vessel dark. No tubercles. Anal feet very small.

Found a little shiny on corn June 25-

Damage Aug 12 1895 - Corn large brown firm

Probably = doxipittatus

5.V = V

Little s-f like Hylotoma on alder, Jefferson H. N.H. June 24 1895. Egg in saw cut in the edge of the leaf, swollen out, 1.5 x 1.2 mm Hds 55 shiny black Body whitish, feet green. 7th feet, except joints, 9 tubercles in  $\square$ , s-r ridge feet outward, anal plate & setae black. Feet 6-10, black spots feet.

Molt June 29 Same Hds 75 Body green, tubercles black, hds pale brownish red (Like V)

Same as V. Put out.

5W. Jul 13 Hd 1.4± pale brown, the face white, a black band bordered with white behind runs up from jaw. Antennae black ringed; a + shaped black shade in  $\Delta$ . Osh & feet black. Body brown luscious whitish, an opaque sd & s-v white shade leaving the rest grayish; a black mark at base of foot on 2. Feet & prongs white. Anal plate ridged as usual but immaculate except a central d. shade on a venal continuum with d. vessel.

Molt Jul 17 (sh hd 1.5) Hd. dull green, white on  $\Delta$  and an area around it; ant. black with narrow white ring at ends of joint. eyes black. a trans. brown line at side of hd. feet. W & s-v bands dark translucent a sd & s-v opaque white pigment band, contrasting; central sh. narrow black; a large sd oblong spot. Anal plate and prongs white, the 3 hollows of a venal pl. dusky greenish. Prongs black tipped plate setiferous with minute brown tubercle. The feet white a black spot at base of foot on 2.

July 22 Hd 2.2 green <sup>cream</sup> a white blotch on  $\Delta$  and adjoining; ant. ringed white & brown, eye black. joint brown white marks a labrum no shading. C-sh. continuous with body, no black except a little spot at base of foot on 2. Anal plate and process faintly white, spotted, ridged as usual, no hincles, the a venal green in the 3 hollows. Body green, shaded with faintly white on all the annulets especially in a sd and s-v band which are creamy white, distinct, making the interspaces appear transparent green on ant. third. Post. the bands become diffused and spread into the general white shading. same white on ventral s-v ridges folded feet. Legs 5+ annulate.

went down July 28

Calc.	.56	.70	.88	1.09	1.37	1.71	2.14	ratio .80
Found	.53±	.75±	1-	1.1±	1.4±	1.8±	2.2	

5W

single  
2 eggs on back of leaf of *Amelanchier canadensis*  
free on surface close to midrib, touching it very near petiole. Cylindrical with rounded ends, soft shiny white at first colorless translucent later opaque white from embryos. 2.2 x .6 mm  
Yarka from folds double (ventral) hd as wide as egg.  
Hatched June 27 a little Lyda. Hd cont. very pale brown shiny uniform, eye black. Body normal entirely white, rather opaque. Anal process also white as small unused thro. feet. No abd feet. Began at once to spin web. Hd. 55±

Molt July 4 (sh hd .75±) Hd pale brown eye black, ant. apparent black ringed. Body white, milky on the annulets, feet & processes shiny; no black marks.

Hd 1 mm - July 8 Hd. 1.1± brown with a dusky shade in  $\Delta$  & a narrow transverse one behind eye; eye black, antennae black ringed. Body whitish, rather milky, cd & sd spot shiny blackish. Processes & feet white, a little black line at base of foot on 2 & tip of anal process black. Plate colorless. D. vessel narrowly dark.



Out April 1896 = Harpiphorus!  
 [=Harpiphorus maculatus?]

5XB  
 On yellow flower standing  
 Fort Lee N. J. May 31 '96  
 A tiny brown spot behind  
 eye & dot at base of  
 occiput on vertex \*

5XA Three of the 5X material with a spotted  
 head. Hd 1.15 pale, slightly brownish a dusky  
 black cloud on apex and a smoky dusky  
 patch behind, a little above the black eye  
 spot like 5X but no points seen. Black dot on  
 anal pl. Another 4 traces of black patches on hd.  
 Another hd 1.2 - Black patch on vertex constructed,  
 but distinct widening below above  $\Delta$ . Lateral  
 patch joins eye by a point. Trace of a dusky  
 black lateral band on body

July 9 Hd .6 black like more dark, smooth black  
 Hd 1.4 Hd pale brown a black patch at apex  
 a trans. one behind eye Body curved, 6-annulate  
 traces of white point on 2<sup>d</sup> & 4<sup>th</sup> whitish, not  
 shiny a greenish dorsal d. separated from the  
 white SV by a smoky black band of segmen-  
 tary dusky patches. Small black patch around  
 Trace of a geminate dusky d. shade.

Other with constricted apical patch same lateral  
 shade almost continuous. D. more distinct  
 head & ground for hd curved whitish a slender  
 patch on vertex Red shiny dull leather d. smoky  
 blackest spotted lat for waxy white Hd 1.5  
 #5XB ultimate stage like 5XA as a head!

40A	.27	.39	.56	.8	1.04	1.33	3 Jack
Found	.25	.4	.6	.9	1.1	1.5 ±	

Out Apr 9 - Harpiphorus!!  
 [See 40A] 5X [=Monstegia ignota?]

Curled spirally on Strawberry leaf Jefferson St.  
 N.H., June 25 1895. Hd .5 ± Molt June 6 Hd .6  
 pale brown, shiny, eye black. Body whitish, not shiny  
 6-annulate, distinct but larva so small hard to  
 count, food pieces no marks. Curled up abdomen  
 Another hd .8 Segs 6-annulate. Body ground glass  
 whitish only colored by food. Feet 6-13. Hd very  
 pale brown shiny, eye black, jaws brown. Thorax  
 a little longer than abd. Hd large in proportion.

Hd .25 Same but darker, blackish around eye,  
 Body whitish, not shiny annulate. Same  
 Hd .4 (hd .3 ±) brown, eye black shiny, whitish  
 food shiny, annulate, same, July 9 Hd 1.1 July 20 1.5  
 but no points. (see 5XB)  
 a faint dusky lateral  
 band of spots, distinct on 2  
 Stage hd 1.5 ± Hd bright pale brown, uniform, eye black  
 a groove at vertex of each lobe. 2-4 enlarged. Most  
 small, lateral outline very even. Segs neatly 6-  
 annulate with minute, blend white points on  
 2<sup>d</sup> & 4<sup>th</sup>. Whitish, not shiny, a faint green tinge  
 dorsal. Thorax dark green from the large crop  
 full of food the great portion of it. Canal nearly  
 empty. No marks. Dorsal greenish tho. feet clear  
 with brown tips. A minute black dot in center of  
 anal plate. Prechitae not very distinct. Head curled  
 T.O. all round part seen a faint smoky red black shade on 2-4 same

yellowed July 4. Body very uniform except d. vessel anal  
rim yellowish

5Y

Solitary Lyda on *Populus tremuloides* J.H. Pitt.  
June 26 1895 in a portion of leaf simply  
turned over & fastened with strands of gummy  
web. Hd greenish white, rather opaque, thick  
brown dotted over vertex & down to near d  
a pair of brown black, transverse bands, 2 on  
each lobe from above eye to near anal.  
suture shiny. Eye black, long. antennae pale  
narrow ocell a red spot on 2 black shiny.  
Body wrinkled 3-annulate whitish green with  
d. lat. s-v more translucent & darker  
green bands. Anal plates white <sup>and edged</sup> <sub>minimally</sub>  
2 black patches on anal plates. Processes  
pale. Hd 2.3 ± 7th. feet small, pointed, pale.  
moulted July 30 Hd. same; mandible brown  
lined, black at tip. w 2.5 unit s-v folds and annulets  
distinct Body all without black except a line on 2  
at base of 7th. feet, antennae all white; 2 spots  
on anal plate. Folds & annulets all opaque  
yellowish green, in folds a d. s-v band within  
the opaqueness & consequently clear green. 7th  
feet, anal plate & processes pale yellow. <sup>face creamy</sup> <sub>white.</sub>

5Z

a colored s-f, edge eaten on *Aurelanchia canadensis*,  
Jefferson Highlands, N.H. June 26 1895. Feet 6-11  
those on 6 & 7 large & well developed, used; on  
8-11 small; not used; just half of body more  
or less curled up. Hd rounded, vinous brown  
a dotted smoky black shade in d & over  
vertex confluent with a darker one up from  
eye. eye black, w 1.5 ± Seps about 6-annulate  
pale vinous, an olive black d. band, throw-  
ing off oblique branches on 9-11, a series of  
creamy white fat patches, solid, but of  
granules next d. line, largest 9-11 where  
they touch the oblique branches. Tubercles  
blackish, smooth, obsolete d, but distinct  
laterally, s-v, apparently on 3 annulets. Bases  
of 7th. feet brown, the rest clear, yellowish.  
Turned all pinkish to wallow July 1  
also on *Prunus serotina* and *P. virginiana* Aug 1 1895.  
another hd 1.1, pale brown with a black band on vertex. Same  
another hd 1.1 but body very much smaller, the wrinkles  
hardly discernible. Pale vinous, feet green, a row of  
faint whitish s-d fat patches, obliquely cut.

6A = 2C

Little Hylotoma on strawberry, Jefferson High School  
W. Va. June 28 1895. Feet 6-10 small on 11, a  
pad on 13; the feet large. Hd pale brown  
darker through the middle. The feet brown,  
black marked. Body green with a white  
s-d line. Bleish dots scarcely indicated  
but spots on esp. folds, Hd conical. 8 ±  
June 30 Hd 1.0 Brownish green with black shades  
on vertex and arcuate one across front of  
eye. Body green, a white s-d line, esp. feet  
glutted. Setae on 3 arcuate but tubercle  
red colored. (sh hd 1.1)

Molt July 3 Same as 2L = 2C Hd 1.4

Molt July 7 (sh hd 1.4) Hd. 1.7

Went down July 11.

6.B

Lyda on Viburnum Opulus Jeff. H., W. Va. June 29 '95  
Stage hd 1.8 ± green, eye small black, mouth brown  
ant. long black ringed. Body uniform green,  
almost emerald, no marks, d. v. dark; anal  
plate ridged, the ridges & under scarcely white  
anal processes whitish. A small, geminate  
dusky black mark on csh. Black annulus at base  
of the feet small, feet pale. Seps deeply 4-ann.  
Stage hd 1.4 very pale testaceous marked same. Various  
transverse csh (except central spot) & s-d spot shiny  
black. Seps strongly 4-striate, a little whitish  
greenish, narrow black marks at base of the feet  
Anal plates & processes concolorous, immaculate  
marked, mostly brown in  $\Delta$  and over apex; shiny.  
Stage hd 1.1 ± Pale brown, blackish on vertex and  $\Delta$   
eye black mouth brown, ant. ringed. Csh all black  
as s-d spot, but not a trace of black at base the  
feet. Body whitish white, scarcely green except for food  
mouth went down Hd 1.5 ± but like 1.8 hd. <sup>csh with</sup> anal dark not

ECA. July 15. Hd. 8 all white, slightly brown, eye black, no marks  
 and annulate the food colony is no marks. Well annulate  
 Hd 6 same, Hd 1.8 July 28 reddish in water, no marks eye black 16d  
 green waxy, 7 ann. no marks. July 23 "shiny perfect" like 6C  
 July 25 Hd. 7.5 no marks = 6C  
 July 31 Hd. 1.2 a blackish sd shade no marks white anal spot

*Strongylopterus* or *Minimus opulens* Oxyt  
 Hd whitish, eye black, a large black patch  
 on vertex, neat, almost pyriform. Seps 7-  
 annulate, minute black setae on 2d and  
 3d. Body tapering a little post, straight  
 or curled spirally, feet 6-13, whitish,  
 translucent, not shiny, appearing green  
 from post except I-V, a faint black  
 lateral shade bounding the apparently  
 green area. a single small dirty black  
 anal spot. Hd 1.8 tracheal distinct  
 reniform. The feet clean with brown tips.  
 Another on *V. cassinioides* Hd 1.4 vertical patch  
 brown, in front of a little darker than ground  
 (annulate, same) shading into black at neck.  
 molt July 5 annulate pubescent all immaculate  
 waxy whitish covered. Hd a black testaceous  
 eye black, no marks at all. For ground.  
 The one hd 1.4 shed July 8 for ground same  
 Same, April 29 1896 *M. bilineata* var.

6D

On larch, yellow Highlands, N.H. July 3 1895  
 Hd pale brown, <sup>dotted</sup> eye black. a pale arcuate line  
 over  $\Delta$ , w. 1.4  $\pm$  Seps 5 annulate, last two pedicel  
 feet 6-11, 13 Body green shaded with opaque  
 pale green (pupation\*) sd & stig. broadly  
 leaving more translucent d. & lateral  
 straight line and a little irregular wavy  
 sr folds; feet concolorous, the tarsi clean  
 with brown last joint. Solitary eating readily  
 but holds on by abd feet, curling end of abd  
 to hold on by. Other hd. 1.5  $\pm$  all alike. Very  
 hard to see as match leaves. set on needle  
 the head close to branch. Sacal vessel form a  
 double pale line and tracheal line shows  
 white. The bright green fat granules are aggregated  
 along d. vessel, broad sd band, tracheal line and sr  
 tracheal line straight, distinct, white  
 Same, Spring 1896 19  
~~*Dinamo luteipes* (H.S.D.)~~  
*Henrichia luteipes* Muesebeck

6E (of 6L)

Resembling 4M on red berried elder, sent from  
Franconia N.H. by Mrs. Slosson. (See blow up)  
Upper half of hd shiny black, lower white. Body  
streaked almost continuously with black  
on all the annulets above spiracles except  
in a broken pale red line, very slightly festooned  
but crossed by black a just  $\frac{1}{2}$  of each seg. Anal  
plate black. Feet 6-13. Segs 7-annulate. ♀

[See 7V]

6F

Common-looking spiral curl on Ilex verticillata  
Jefferson <sup>mount</sup> N.H. July 6 1895. 7-annulate, 6-13.  
Whitish, translucent, no marks, but thorax looks  
green, hd, dark gray above spiracles from  
contents of al. canal. Hd pale brown, eye a  
black spot; shiny 1±. The feet pale.

July 9 Hd 1.4± Same. Red has a slaty, or gray  
appearance, thorax more greenish. [next same?]

July 22 Hd 1.8 (swimming jacket) Hd pale brownish  
eye black. Body annulate, emerald green  
shining; uniform, no marks.



6G

Shiny sticky slug on black birch on under side; solitary. Hd deep shining black. w. 7 mm Body as usual, colorless whitish. pro green; thoracic feet all pale, nearly colorless & little brownish especially claw. Feet 6-12. Nuchal line festooned, inconspicuous the spiracles at apices of the seg. arches. Wetzel 13. Entirely not shiny whitish, carinal tinged, eye black. Feet & head concolorous with body.

6H = 3N

Like rose 5f on fire cherry, Profile House, U.H. July 11 1895. Hd. 6 black, shiny Body whitish food green, Feet 6-11, 13, seg. scarcely annulate with 2 rows of low concolorous warts per seg. bearing short fine setae - body pilose. Head hairy, feet clear, tips brown tipped. Hd 1.1 pale, slight testaceous, a large black spot on vertex and one over eye which runs forward in a chord across  $\Delta$ . Warts in 3 rows on 3 ill defined annulets. Pile short, pale. Body whitish translucent, a leader black band on thorax 3-4 which bleeds into color of al. carinal feet like a continuation of it. Feet whitish. Another 8 Body whitish, Hd with black spots as above. Another Jeff Highlands July 12 Hd 1.1 Same but body with obscure to approach from middle of 2 to middle of 13 inky leader black except for numerous pale dots which are the tubercles bearing the fine setae scattered in irregular groups over the ill defined 3 annulets. 2 ant, 13 feet

and all s-v whitish translucent, also feet. 6-11, 13. Hair short & very fine, dark dorsally, pale s-v. Hd finely pubescent, the pale parts minutely brown dotted.

Spin the papery web across between leaves of SB. Alto hd .3 pale brownish, eye black. Body colorless setae few, fine, unispiral. Sides fluted June 7 Aug 7 1895

This must be = 3N

Found on yellow birch Jeff. Hills N.H. Aug 19  
Hds. 1.0 .8 .8, black spotted; back pale.  
Found them around New York City on  
several plants esp. wild cherries  
Sept 1895.

On wild cherry Army Park May 1897.

Was on willow Greenwood Lake N.Y. June  
21 1896.



61

Sf solitary, curled on back of red berryed  
elder, Jefferson Highlands, N.H. July 14 1895  
Hd whitish, a moderate rounded defined  
black apical patch; eye a black spot  
w. 2±mm. Body as in Strongylopusis, feet  
6-13, tho. scarcely enlarged, its feet mod-  
erate. Whitish rather opaque, food  
scarcely showing, <sup>also rather distinct</sup> Sept 7-  
annulate, very indistinctly banded  
transverse orange on 2-3 annulets,  
just a trace of color scarcely serving more  
than to give a yellow tint to larva.  
Nocheal line evident, white, the spir-  
acle opening as white expansions. Feet  
and anal flap immaculate.

Hds 1.7± Same but no orange bands visible [Rare  
vertical black patch absent. but no eye large] Sept 21  
Hd pale between a trace of cloud at vertex eye  
black Body greenish gray, slightly tawny shaded  
on folds d. Hd 1.6± for ground

[3/4 1/2 mm parasite, so not host, N.H. 1896]

60

On yellow birch in the woods, Jefferson Highlands  
N.H. July 21 1895 Hds 1.4 whitish, brown tinged  
with vertical black patch, one on eye, but  
both very large, diffuse on edges and sub-  
sistent so that <sup>the</sup> head looks black, with a  
pale patch over and on side of lobes; shining  
dorsum dull olivaceous shading into a dusky  
black lateral band, continuous, ill defined  
a square velvety black oval patch  
on corded whitish, a black shade along  
bases of thoracic feet. Legs nearly 6-annulate,  
number 2 a little larger. Prothoracic line white  
thru a little enlarged, greenish, body more  
brownish. Feet 6-13. Sits flat on venter.  
The one or folds a little touched with black-  
ish. Head moderate, not prominent.

July 23 Same but ground pale viner waves instead  
of olivaceous green. To J?

Calc. .64 .8 1.1 1.4 1.76 2.2 water 80  
June 27 1896 *Desmetodes remota* MacG. 96

6K  
Cult. sporadically  
On yellow birch in the woods. Hd large, prom-  
inent with grooves before vertex of lobes  
like 6C, pale below, very above, shiny, eye  
black, no markings. 2 small, body only  
slightly tapering, feet 6-13. Whitish trans-  
lucent, not shiny, feet green whole  
length, plainly visible. Thorax scarcely  
at all enlarged. Legs finely and neatly  
7-annulate, but the increase more  
distinct, slightly folded. No markings. Tho-  
racic feet colateral. Prothoracic line not  
very distinct. Hd. 1.8 ±

Molt July 22 Hd 2.2 Same.

Hd. 6 perhaps stage I pale very faintly brownish, eye  
black. Body colateral whitish, annulate, not shiny  
food green. The feet large colateral. Seems to  
have hatched from large swelling under moss  
epidermis. (Saw cut above) 2 x 1.5 mm. Reproductive  
elliptical, toward middle of leaf near a vein  
Aug 4 18.8 pale, brown a water. Body same.  
Molt Aug 13 Hd 1.8 (shd 1.25)

Resembles *Desmetodes cressoni* but less yellow, even, the oliv-  
aceous colateral & only green from food. No 5th band of feet  
at end of a few individuals occasional granules.



Out (or 5C) Apr. 1895. *Macropylia bilineata*  
"Macropylia ? n. sp. near *flavicornis* (?)" (Mac 5)

6L

Spinal curl on elder with 6I with which  
it was confounded till it shed July 21.  
Head light brown, immaculate (see 6I)  
eye in large black spot, almost none on vertex.  
Shiny, w 18 mm ± Body greenish white, not  
shiny, a dusky black d. stripe and a  
very distinct, velvet black lateral one  
broken into 2 square patches on 3 and 5-  
annulets connected by smoky shadings,  
broken <sup>just</sup> evident on 13. D. band greenish  
black, a little dot on front edge of head.  
Segs mostly 6 annulate, feet 6-13, the colorless.  
Anal plates immaculate. Later also faintly  
orange banded on annulets as in 6I  
Anal flap broadly orange (emptied) July 28  
Shed P.M. Hd brown with blackish apical  
shade, eye black. Red shiny greenish brown  
on annulets except the orange bands which  
greenish rather distinct, 9-annulate, the  
annulets well marked a little tawny brown  
Orange bands a spiral on 4 annulets (1-3 and 7?)

6M

Flat on venter on Epilobium, Jefferson Highlands  
N.H. July 23 1895. Hd pale brown shiny, a little  
darker on vertex & eye black, w. 5 Body  
waxy white but not shiny, food green, evident  
Segs mostly but strongly annulate. Thorax a  
little enlarged, feet 6-13, thoracic colorless.  
Molt July 27 Hd 9 pale brown, a Δ patch of Δ L  
vertex a shade darker, another around black  
eye. SV on thorax a little expanded and  
fluted. Segs regularly & neatly 6-annulate  
the annulets closely flattened, their creases  
just like seg. incisions, shiny, scarcely dis-  
tinguishable which makes the annulation plain.  
Surface as before waxy white, the annulets  
so narrow that shiny appears not shiny.  
Larva rather long and slender.  
[Eg. in a swelling under lower epidermis near  
the margin solitary 1.5 x 1 mm.]  
Molt Aug 11 Hd pale with dusky dotted eye black  
Body shiny waxy, 6-annulate the last ten  
narrow, folded and blackish shaded (shiny  
just) Hd 1.2

[cont]

6N

Eggs eaten on gooseberry, Jefferson Highlands Mt  
 July 28 1895. Feet 6-11, 13. The feet clear  
 Hd. 1.2 rounded, flattened before, a black fulvous  
 shade bordering sutures closely and a band up  
 from black eye, dorsal & venter; ground green  
 Seps 6-segmented with minute dark  
 dark setae on 2<sup>d</sup> with and speckled over  
 s-v region. Green, rather transparent &  
 vitreous marks, scarcely shiny, spiracles  
 black. No anal pump. A very faint trace  
 just a hint of yellowish in stig. region.

Hd. 1 shiny black-brown, eye black. Body  
 pale green, darkened from food, spiracles black  
 Hd. 6 shiny black, body whitish green, feet dark  
 the sternalia feet ringed with blackish  
 Hd. 4 brownish, eye black. Body colorless, feet  
 green, the feet black, ringed with pale.

Eggs in elliptical cups between 2 epidermis on the  
 edge of leaf, a slight swelling (1.3x) solitary

Pristiphora praeulariae  
 (det. ex larva & fly)

Calc.	.52	.65	.82	1.0	1.28	1.6	2.0	2.5	r.Y
Found	5	.65	.8	1.0	1.2	1.6	2.0	2.5	2.5

60

Larvae curled spirally on back of leaves of  
Cornus alternifolia Jefferson Highlands, N.H. July  
 30 1895. Gregarious, feet 6-13. Very many  
 on one bush, the leaves half eaten off it.

<sup>VIII</sup>  
 Hds 2.5 mm but small for body, lower than  
 2, all black slightly w scarcely shining.

2 ant. s-v, venter and feet to 13 orange yellow  
 dorsal to spiracles olivaceous black, annulet  
 2 in middle, except last and whole of annulet  
 4 to the s-v color pale greenish gray both  
 interrupted by the olivaceous d. dorsal. Seps  
 6-segmented, the 2<sup>d</sup> & 4<sup>th</sup> with minute setae.

Anal plate black, darker than dorsal mark.  
 The feet spreading, pale yellow, not very large  
 abd. feet all well developed. Body large &  
 gradually tapering past end of 13 rather  
 truncate (apex) sloping from middle of 13  
 to anal plate. Length about 25 mm, width 4  
 The pale d. bands contain fine granules. In  
 some they are broader and the dark

markings somewhat diffuse and pale.  
Small med. 1.2 shiny black, 2 ant  
s-v feet pale yellow, dorsum and pale  
obscure without marks, slightly shiny,  
annulations obscure. Anal pl. dark length 12.

hd 6.0 brownish eye black, or dark shade  
on outside of lobes. Body whitish, the food  
green anal plate brownish, feet colorless.

hd 6.0 <sup>(old)</sup> brownish a black shade up from  
black eye. Body of subtranslucent white  
no marks, food green in thorax more yellowish  
feet. Legs finely annulate. Body shape much  
as in next, no marks, even on anal pl. 24.5  
hd 6.0 <sup>I. 5 ± 2 mm. 1st stage II</sup> black eye. Body of subtranslucent white  
no marks, food green in thorax more yellowish  
feet. Legs finely annulate. Body shape much  
as in next, no marks, even on anal pl. 24.5  
The egg leaf with rest of slud body. hd 6.0 <sup>I. 5 ± 2 mm. 1st stage II</sup>  
Egg under lower epidermis raised through  
film above. Close to midline in a long  
line, the cells imbricated. One edge of swelling  
on midline or long vein the other || and narrow  
compressed of numerous indentations. Width 1 mm  
length 4-30 mm according to number of eggs.  
Punctures .8 mm apart.

hd 6.0 (young) exact same as in last stage ex-  
cept that the d. pale annulations are light  
blue instead of greenish gray, the black  
is bluish rather than olivaceous and the  
skin is very slight more shiny. hd  
2.5, ab. hd 2.5 mm.

hd 1.6 (Stage 1.2) shiny black. 2 ant & s-v. feet  
yellow, d. with a blackish || on each seg.  
on whitish ground; i.e. marked as in next,  
but color of pale parts of dorsum more like  
side so to appear as the ground color.

Another hd 1.6 (older) dorsum shaded with gray blue  
as just like next but marks fainter.

hd 2.0 like last stage but marks a little  
fainter, though not fainter than some mature  
specimens. Distinctly brighter than 1.6 stage. Length 19

hd 4 (old) .75-.8 mm dark blackish brown  
eye black, as before, no marks. Length 11.5 mm

Stage IX found in wood, entering the ends of strokes  
or board, with abundant saw dust.

Out June 30 1896 H. tarsator

opposed brown! like colorless

6P=M

Allied to M and 4J as Cornus pumicata or stolonifera Jefferson Highlands N.H. Aug 1 1895.  
Feet on venter, straight, the feet slightly spreading, abd. 6-11, 13. Thorax enlarged with d. 1 lat, or rather flattened. Body gradually tapering post, 13 rounded. Hd moderate length, wider than 2 w 2 ann whitish carapace, eye black. Legs scarcely annulate, acetabula indented. 6 annulate all waxy whitish translucent, a pair of fine green granules bordering dorsal vessel underlying on the thorax into a 3 lobed patch the largest on 2 with clear center. An orange shade in 11. Feet colorless. No food seen (empty?) except a brown granule in 12.

(=M. The corn. was under an Acantho-  
cauchia condensata)

Out Apr 16 1896

6Q

M. sexta <sup>Out 1896</sup> crass

6CA. July 15 on Urtica dioica spines Hd. 8 ad with slight brown, eye black, no marks. Body immaculate, food coloring it, no marks well annulate.

Hd 6 Same. molt July 25 Hd. 7.5 no marks = 6CB

July 31 Hd. 1.2 A bluish 5d shade. No marks on head. No anal spot.

Hd 1.8 July 21 Reddish on venter, no marks eye black. Body greenish waxy. 7 annulate no marks. Another Aug. 1. Same but dusky 5d shade dusky d color above spiracles and it appears darker for food.

July 27 (empty jacket) like 6C

6QA Hd 1.4 Same but besides black lat line all of dorsum shaded blackish, 13 pale with faint dark shade on anal plate.

S-V waxy white Hd pale, orange above venter.

Aug 11 empty annulate blackish in folds a pale d. line and dividing d shade (with lat)

Aug 12 (empty jacket) all pale covered, shiny like 6C

6R

Solitary edge eater on yellow birch, occurs not  
 much more as any described (cf 3E etc)  
 Feet 6-11, 13, no prongs, anal plate evenly  
 rounded. Hd pale brown with a brighter  
 brown shade up from eye and narrowly  
 in median suture at apex; eye black  
 ca. 1.0 mm. Body smooth, indented or  
 obsolete annulate, clear pale green  
 without marks. Nocheal line narrow  
 spiracles dark. Edges of d-vessel whitish.  
 Aug 11 Hd 1.3 (=5I with 1 cream tip) hd pale  
 greenish dusky brown dotted, a dark shade in  
 ca. suture at vertex eye black. Body clear  
 green, d vessel a double yellow line 2-12  
 with 3 lines on 13 against black faces.  
 Nocheal distinct; the feet blackish at base.  
 No anal prongs.

Molt Aug 13 Hd 1.45 green brown up eye, black  
 shade in vertex suture. Body same.

Aug 18 near uniform emerald green marks on body  
 near gone but not same.  
 fly hatched in cover. Seem to be 5I

6S

Like L but whitish, gregarious on yellow birch  
 Jeff. High, N.Y. Aug 19 1895. Sh. hds 1.2 black  
 Hd 1.5 shiny black. Sit on edge & w back  
 Feet 6-12, 13 small on 12. Seps very indistinct  
 6-annulate, on 2d & 4th small concolorous  
 a slight yellowish tubercle each with one  
 seta. Body sordid white, faintly greenish  
 a black s-d line, distinct, even, 3-12  
 a pair of short curved black anal spines.  
 S-v folds marked with 2 rows of black  
 dashes tho. feet black, paler at joints  
 Hd 1.8 same but body faintly ochraceous shaded  
 with sordid white and black anal  
 line connects the s-d. lines. Tho s-v streaks  
 form 2 broken lines on the two s-v folds  
 (see eleven sent more Sept 9 1897 but  
 all dead or nearly so on arrival)

6T

On Carex near summit Mt. Washington N.H.  
Aug 22 1895. Feet 6-11, edge eaten.

Hd conical, shiny testaceous, eye black. 1.3  
Body pink-cinnamon a broad adanal and  
stig. white band, the former edges of d.  
vein filled in by blackish veinal,  
the latter edged above by a blackish  
shade. All from 2 and hind are lost  
as 13, the former showing as a dark shade  
Body slightly shiny esp. indistinctly about  
5-annulate. Feet concolorous.

Parasys March 21 / 1896

vernatus extremus

but hairy as all the Mt. Wash-  
ington ones are (Marlatt)

June 6 on Hickory Mt. Lee, Hds large black  
spotted and mottled with pale, look black  
but with dense ground color of pale.

6 U on white oak. H. & this. feet black

w. .6 Body colorless tubercles on joints & black

shes for giant may 29 H. .5. Parasys = 4N  
but Hds black & brown mixed

molt Aug 25 Hds black & blackish .8, the feet  
nearly colorless. Parasys extremus black black black  
H. .5. feet blackish molt May 27 Hds 1.2 annulate with  
fine setae. Hd pale with eye water, a black patch on sutura  
end of face eye color. Parasys extremus black black black  
dotted patches. Parasys extremus black black black  
molt May 20 Parasys extremus black black black

Like Acrodactylus derocalis but head black Aug

on very young leaves of Hickory, found on new  
shoots from a stump, Mt. Lee, Sept 3, 1895.

Head shiny black, a little paler around  
mouth. w. 1.2 mm Body stiff, plump, abd

feet rudimentary and used, 5-8 edge fluted  
fine setae from concolorous tubercle. Color

pale green, shading into near colorless  
at end of 13, tubercle hair whitish, the

feet strong, colorless with dark hairs.  
Egs not annulate, slightly 2-ridged when

the tubercle are. Old feet represented 6-11  
Hd finely pubescent. Length 9 mm. Eat down

the whole leaf between the vein. Sit on back  
flat on venter and by the feet.

Molt for giant Hd & tubercles smoky blackish  
Body green, slightly waxy but not shiny

shrubbery somewhat. Annul. pl. & feet  
also faintly smoky like head.

Spun little white cocoons  
June on Hickory Mt. Lee, May 24 1896 Hds .4, .6 feet  
colorless for feet, this. feet shiny black.

(cf GR, 5I-etc) 6V = 5I = 3M

Edge eater on high bush huckleberry, Fort Lee, N.Y. Sept 3 1895. Feet, 6-11. Hd pale testaceous greenish, a brown shade eye to vertex a darker one on sutures spreading on A. w. 1.3 mm Body clear green, rather dark. d. vessel a distinct black band edged with a broad green stripe of fat granules which fade off the near end. areas not forming a mark but blending into ground color. On 13 d & sd fat stripe the end on 13 solid, filled with green fat, Seps. rather distinctly 6-annulate S-v folds black dotted. The feet faintly brownish. Circle the end of body more or less underneath. Tracheal line

fly Apr 10 1896 = Pristiphora tibialis

Another from forest Aug 10 1897 Same

Calc. .42 .60 .84 1.2 1.7 2.4 rest 7  
Feet .4 .75 1.2 1.6 2.1

Heurichia phytophagica n. sp.  
7A

Solitary edge eater on young leaves of white oak, Van Cortlandt Park, May 9 1896. Seen in stage I. Hd round shining black-brown, .4 mm Body hirsuteless blackish, 6 annulate, with two rows of short blunt pale granular points, annulets 2 & 4, about 6 on each side. Tracheal line pale; feet 6-13. Many short pale setae on head, Eat whole leaf on edge. Nov 11 Hd .75 Pale, faintly brownish eye black, a very faint dark vertical streak up from eye. Body whitish translucent colored by feet, the points blunt, fleshy, slender tipped. Still eating on edge. Nov 11 (Hd .6) number 1.6± Veg pale brownish eye small black, round brown shiny. Body translucent waxy whitish not shiny, 6 annulate, minute whitish points on 2 & 4. No annulets. Tracheal line white. Incessant feeding. Can curl when at rest. Food not too conspicuous.

This is very near F and caene body revised with FA. The lateral spot is remnant of F's lat. band, and the ant. patch in sv fold is nr of the s-v patch of F.

[Very like 6 F g.v.] Wed May 17

Found on oak Amur Oak, May 22 1897 East something like F looking somewhat, but none seen on same branch. Solitary edge eaters.

Stage Hd. 1.6 pale conical brown eye small black mouth brown. Body moderate translucent dull whitish with a tinge of yellowish & green, the folds of skin whitish. Seg 6 annulate, joint obsolete, not seen from traces of with  $\frac{1}{2}$  in obj. No marks in a small black patch lat. on 3 annules and another on ant. sv fold none in legs distinct. Nucleus very evident! Point pale in one distally indicated by dusky dots. Spiracle on 2 ant

Stage Hd 2.1 pale conical, fine brown dotted, eye black. Body 6 annulate, smooth no joints seen  $\frac{1}{2}$  in obj., then spiracle uniformly green from blood dorsal vessel dark, outlined by a light green fat, not contrasting strongly with the other green, but the vessel distinct dark. A black patch on ant. sv fold and smaller another laterally. Tracheae evident in cavitation next up near to dorsal vessel. The feet pale. Small prob smooth, scarcely shiny at all. Abd. fat small 6-13 very green, differing markedly from stage before.

May 22 Same but shiny. No shed hds. Another Recept 2.3 June 6 1897 black dot distinct on dorsum nr s-d annule 2 & 3 one on s-v on 3 and one on base each thoracic foot. Hd brown eye markedly black. Seg 6 annulate. On white oak. Paired dusky translucent patch in annule 1.

Ant March 27 1898

None on white oak Amur Oak May 22 1897 numerous but solitary on either side of leaf after at edge, all green. Body uniformly colored fine blood, only tracheae whitish. Segs very (over) 7 B

Flat on center, solitary on white oak. Van Cortlandt Park, May 9 1896. Pupating circular 1 mm holes scattered on upper side. Hd. 25 mm very pale brown, eye black, short pale setae. Body guard plates whitish, food brownish, all short coluber Y shaped spines, thick with short sharp  $\delta$  apparently averaged as late

Hd 4 (just shedding) all coluber like body, eye black, mouth brown. Spine with long shaft and sharp recurved branches in long. plane  $\delta$  seg. scarcely annulate. Thoracic feet large, abd. 6-12, 13.

May 11 Hd 6 shiny white shiny, eye black, mouth brown on white oak. Body pale green, spines pale from food, Y-spines, rather short, all concolorous whitish. Feet pale, thoracic scarcely brown tipped.

Another just shed May 11 Hd 8 same, length 6 mm. Body becomes darker green from food, but the blood is pale green, tinting the sv area.



indistinctly annulate, spin short, arranged as  
in fig 7BA below, whitish. Hds. 1-4, 1.4 very spotted.  
Another Fox Lee, May 23, at work, spins same lower than

May 14 Hds 1.4 pale greenish white eye black  
mouth brown. Body green & spin short  
whitish. Entirely green, no marks, spin  
short & even narrow, none dark  
tipped Head immaculate. Seps obscurely  
4 annulate, spin in 213 annulets LIBUM

Emptying May 16. Still green but whitish

May 16 Feeding jackets. Smooth, all  
with shiny greenish head & thorax  
emerald tinted, d. vivid green.

Out March 25 1897 Collected at Redford Park N.Y.

Out March 26 1898 Empty 25 1897  
The pupae June 10 Hds 4 all green  
long dark spot across 2  
June 12 Hds 6 same 2nd Hds 8 patch  
on 1st



Solitary in white oak, Pelham

Mass. N.Y. May 18. 1897. Head

with a black patch in D, eye black

no marks, all spins pale Hds 1/2

Spine as in E (1896) + a single one behind

spiracle. May 19 Hds 1.2 all green, on tree

pale brown dots on thorax. Spin same as pale.

Eat circular holes in body of leaf.

May 23 Hds 1.4 all pale no black marks

Ollivieric occur. Spin same as on treatment time  
3rd Jan Belmont. Emptying May 24  
One at Northham N.S. June 7 1897

Position of spin on can. as in fig or above  
unless trifid ~~trifid~~ ~~spin~~ ~~with~~ ~~3rd~~ ~~Jan~~ ~~in~~ ~~unit.~~  
Another TB ~~Magnum~~ & J. June 7 1897

7C Out April 5 1897

Probably a var. of 4N. Like 4N in shape,  
body inflated, unseed tiny abd feet 6-11, 13  
Hd 8 greenish a black patch in D and  
more brownish bands up from eye meeting  
at vertex. Body pale green, feet showing  
darker (not colorless). 2 trans. row of black  
piliferous dots per seg. large and distinct  
a dorsal, smaller post, on the last seg.  
only visible with lens. The feet colorless  
spreading 2 larvae fed on variety on  
fresh leaves. Black oak or maple each  
eating whole leaf. Ken Corthlandt May 10.

Ultimate pupa Head rusty, thorax emerald body  
yellowish. Tubercle pale, larva on larva striped

Another lot (22) Fox Lee May 25. Hds 5 black but

2 pale patches at vertex feet. Body colorless.

Hds 6 pale at vertex except band up anterior

face black, body colorless. Hds 8 colorless, except

a black line in the anterior above and eye

narrowly. Body colorless, feet green, tubercle


in posterior only marked with black.  
all the 22 alike! Thoracic feet pale in  
all, even the little ones. May 27 One ultimate  
stage hd 11 June 10 in jar. Another lot 11 small marked  
same 1st June 10 all on body, colorless, etc.

Cole	.35	.52	.77	1.19	1.8	2.7	not 66
Found		.6	.8	1.2	1.8	2.2	

7D

Partly gregarious (all on one plant) large yellow saw  
 on young hickory, Fort Lee, N.J. May 22 1896.  
 Position like 3C, curled around part of a  
 leaf, tenacis feet small, scarcely used,  
 abd. 6-13, small. Hd rounded, not retracted,  
 proportional of small, antennae long, 5  
 jointed; hd shiny black, antenna & palpi  
 white ringed in joints; w. 2 mm Body eyes  
 distinctly 3-annulate, night shining opaque  
 yellow, a white warty fold of annlets.  
 C-sh. 1, tho feet, a large patch on 13 ant. base  
 the anal segment (14) on its entire upper side  
 including the punctured swollen anal  
 prominence and the tubercles shiny black  
 Tubercles rather large but only slightly ele-  
 vated, minutely piliferous, 2 rows on pe-  
 ricly (annulet 1 & 2) and 2 spots on 3<sup>d</sup> annulet  
 behind spiracle. Very few spots S-V. Spiracle  
 small black. Basally, there is a small  
 extra annulet before 1. A faint blackish  
 shade between the uppermost tubercles.  
 One at base of 2.3. 3. 1897.

3 dead pupae (!) Apr. 23 1898 *Megaxyela*  
 sp. near *major* Cress. but ten poor.

sometimes distinct.  Skin and all  
 black marks smooth and shiny  
 Abd. feet without any hooks, small.  
 One went down in ground as soon as pupa home  
 Egg traces indistinct but appear to have been laid  
 near the tip of the very young leaf under the  
 upper epidermis close to and on midrib.  
 Perianal warts black ringed, pale on top, setiferous  
 in a few threads on  
 at side of a leaf  
 very Lyda-like  
 May 22 1897. Same  
 hd 1.2. One shed  
 2.2 - Ash hd 1.6 -  
 May 25 1897. Hd .6 mm  
 of whitish yellow, black  
 eye cut on irregular  
 area on one side of  
 separated & swollen in  
 or a little swollen &  
 distinct cut left.  
 black elevated and yellow, not  
 color mark. Body yellow with  
 black. May 29 Hd 1.8 same  
 upper 2 spots of 3<sup>d</sup> annulet  
 2. (th. hd. 1.25 mm)  
 the mark & anal spots present


Entomological Club  
 Cambridge  
 Laris.

her yellow; retf  
 height .6 mm.  
 ous.  
 rk; joints 4 to 6  
 ax four setae on the  
 the subventral tub-  
 from ia, a very  
 of the thorax. On  
 from iv and v, two

the mark & anal spots present

Calc	.35	.52	.79	1.19	1.8	2.7	not .66
Found		.6	.8	1.2	1.8	2.2	

7D

Partly gregarious (all on one plant) large yellow saws  
 on young hickory, Fort Lee, N.J. May 22 1896.  
 Position like 3C, curled around part of a  
 leaf, thoracic feet small, scarcely used,  
 abd. 6-13, small. Hd rounded, not retracted,  
 proportional of small, antennae long, 5  
 jointed; hd shiny black, antenna & palpi  
 white ringed in joint, w. 2 mm Body eyes  
 distantly 3-annulate, slight shining opaque  
 yellow, a white warty & fold of annulet.  
 C-sh. , the feet, a large patch on 13 ant. basis  
 the anal segment (14) on its entire upper side  
 including the prominent swollen anal  
 prominence and the tubercles shiny black.  
 Tubercles rather large, but only slightly ele-  
 vated, minutely piliferous, 2 from row pe-  
 riy (annulet 112) and 2 spot on 3<sup>d</sup> annulet  
 behind spiracle. Very few spots S-V. Spiracle  
 small black. Basally there is a small  
 extra annulet before 1. A faint d. blackish  
 shade between the uppermost tubercles.

3 dead pupae (!) Apr. 23 1898 *Megaxyela*  
 sp. near *major* Cress. but ten feet.

Sometimes distinct.



Skin and all  
 and shiny  
 hooks, small.

black marks smooth  
 Abd-feet without any  
 One went down in ground as soon as brought home  
 Egg traces indistinct but appear to have been laid  
 near the tip of the very young leaf under the  
 upper epidermis close to and on midrib.  
 Paranal warts black ringed, pale on top, yellow

[Both 7D and 3C can climb a few threads so  
 they can walk over flat side of a leaf.  
 They crawl over them very Lyda-like]

More at Kewy Park N.J. May 22 1897. Same  
 Hds. .8, 1.8 One shed hd 1.2 One shed  
 May 24 (sh hd 1.8) now hd 2.2 - Ash hd 1.6 -

More at Bedford Park May 25 1897 Hd .6 now  
 black long antennae. Body whitish yellow, black  
 spot distinct as on fig. Egg cut on irregular  
 somewhat distorted yellowish area on one side of  
 midrib, upper epidermis fused separated & brownish  
 on area of lower 1/2 mm, lower a little swollen &  
 yellowish in this area. no distinct cut left.  
 May 26 hd .8 = same (sh hd .6) black distinct anal plate, but  
 no spot preceding it and no c-sh mark. Body yellow with  
 black tubercles as fig. Head black. May 29 Hd 1.8 same  
 no black spot 13 ant but upper 2 spots of 3<sup>d</sup> annulet  
 joined, also ant spots on 2. (sh hd 1.25 mm)  
 shed May 30 Hd 2.2 (sh hd 1.8) c-sh mark & anal spot present

Egg saved from edge between  
epidermis of young hickory  
slightly oblique surface .6 x 1 mm  
the spot blackened over and just  
inward egg to margin black

Hatched May 12 1897 Hd round shiny black  
feet 6-11, 13 very small, flaps  
3 w .85 mm. all colorless than feet black  
up body all colorless than feet black  
post covered by grass which

14N  
16C  
Cambridge  
Entomological Club

Tarris.

Sat. yellow; rest  
hot light . 6 mm. 1.2

ous.

rk; joints 4 to 6  
for isetae on the

the subventral tub-  
er from illa, a very  
on the thorax. On

from IV and V, two

West Virginia 1897

7E (Packard p. 317); no wings

Y-shaped flat or ventral on upper side of young  
leaflets, Ford Lee W. J., May 23 1896 (shaded)

Hds 1 mm, shiny greenish whitish, eye on  
black spot. Body green, faintly 5 annulate  
with 2 trans. rows of short spines, all  
rather uniform, on 2<sup>d</sup> and 4<sup>th</sup> annulets

Feet on 8-12, 13 Thoracic feet  
colobous. Length 12 mm. dorsal  
vessel dark green. No warts at all  
3 spines on 2<sup>d</sup> & 4<sup>th</sup> annulets, 1 on 3<sup>d</sup> superior, 2  
on each division of 2<sup>d</sup> fold. Only appears with Y.

May 24 (shaded 1.0) hd brown. No change. Hd and  
thoracic feet seem present. Not too shiny  
and spines larger, because less filled out.

Shiny packed May 25 Hd 1.2 + Sunnys, very  
scarcely shiny, all pale whitish green  
d. vessel dark, legs indistinct 3-annulate.  
L. 11 mm. Hd same color, eye black.

Found one on white oak May 25 } see #4-7B  
Like 3T but blue green, d. vessel not contrasting  
(3T yellowish green, fatty dorsally, d. vessel dark)  
Y-shaped shorter, esp. the limbs in 7E than in 3T

Cule	24	.34	.48	.69	.98	1.4	not 70
Found		.35	.5	.7	.95-1.0	1.3-1.4	

7F

Swollen curled leaves of *Populus tremuloides*.  
Egg under lower epidermis near edge, not  
far from petiole. Little spotted punctured  
on under side  $\frac{2}{3}$  way to apex apparently  
before leaf full grown. These are slightly  
swollen, discolored, pale & as a result the  
outer  $\frac{1}{2}$  of leaf folds back, nearly touching  
the surface, leaving a hollow for larva.

Same punct at borders, but when found the  
larvae ate whole leaf at apex, emerging  
from and returning to the branches.

Hd very pale brown dotted shiny, eye brown  
black, <sup>large jaws black</sup> mouth dark. Body shiny, translucent  
slightly yellowish, tinged with green posteriorly  
from the feet. Segs. 4 annulate, with small 3  
rows of fine but rather long colobous setae  
on 1-3 annulets. Tho feet rather large, colobous.  
abd. small 6-11, 13 colobous, short blunt  
rather thick anal prolegs, also colobous.

No warts, and the head is pale brown.  
Larva ate and returned at once to its

May 15 Hd 5 pale brown eye black small bar on  
 side of head, colorless translucent segs in anal? 2 annulate  
 feet not projecting, setae whitish, very obscure. Anal seg smooth  
 slender, pump, about. Feet 6-11, 13.

house. Body curled from a little at one  
 side of leaf, but good edge eaten.

Can withdraw vigorously when house opened.

Hds <sup>1.4</sup> 1.3 ± <sup>1.0</sup> 1.0. Hd. 7 Same house but no apex  
 cut, only little pump around edge and patch  
 at open apex. (1st at one 1/3 of leaf eaten, hd 1.4

A thin one hd 1.0 still pumping, came out of  
 back door (near petiole). Can rasp with  
 pump while in the houses. Feet hd 1.3 (hd 1.95)



May 27 (this morning, hd 1.4 ±

brown, joint eyes black, large  
 for body. Body all pale  
 emerald green (without lens)

Head to enter ground when part  
 cut. Anal flap finely

no large pumps but slight rudiments  
 of them on edge of flap colored brownish.

no gall

green on each  
 annulate white

Out March 25 1896

None at Fort Lee May 9. Found folded houses on the young  
 tender leaves, but nothing in them but eggs under  
 epidermis white elliptical, 4 x 8 um. Hd. hd May 10  
 Hd 3.5 hd set whitish translucent, partly transparent  
 hd skin kind like as in hd. 3 annulate setae first  
 anal pump, compact, colorless. The feet about 6-11

June 7 Feeds 11 x 9 x 6 a little longer than last week  
 Larvae are larger, increasing during the day.  
 June 13 Hd 1.5, length 6.5 pale slightly brownish, a dark spot  
 around black eye and in apex. Body 11 annulate setae  
 scarcely watery. Setae whitish, slightly annulate  
 head in mid. June 15 7 G Calc 24 .34 .49 .7 1.0 7

Remains salicyliformis? in galls on wickets

Fort Lee N.J. May 31 1896

Young hd faint blackish <sup>mottled</sup> eye black; body  
 whitish, rather opaque no marks, tubercle

watery in 3 rows of segs, obscurely setaceous  
 with fine pale setae. Feet pale thoracic  
 rather large, abd moderate 6-12, 13

inches head .5 a tiny shed hd. in the gall .35

Gall on under side, usually 1 on a leaf, sessile

Round or elliptical (11 leaf) smooth or with  
 a few little barbed nodules, green with  
 a red black on one side <sup>6-8 high diam.</sup> 5 x 6 - 7 x 9 mm diam.

On upper side of leaf a level fleshy area  
 of same color as gall. Leaf scarcely at  
 all distorted, <sup>or flattened as on</sup> rarely gall projects a  
 little on upper side as well as lower.

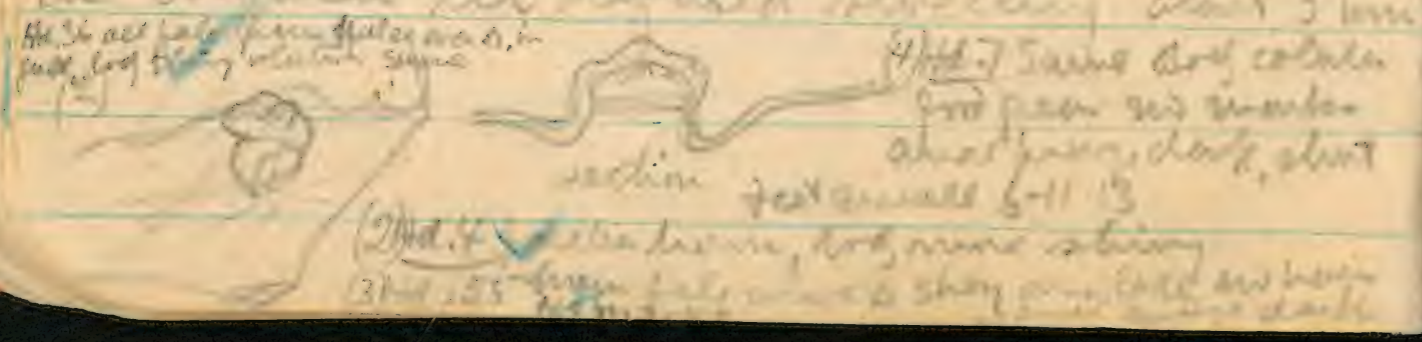
usually one side of  
 midrib toward base.

Larva June 7. Hd. 7 pale whitish, otherwise same  
 Gall is thick, fleshy, hard to cut with  
 dull knife. Shell 1.5-2 mm thick.



slight oblique concave granular areas precede the  
 part of short dusky anal spine. Marks on broad part  
 of anal spine not very fine brown in marks of anal collets  
 (4) anal collets brown (6) anal collets 3 whitish, anal spine  
 anal spine 2 dusky brown covering granular dark tips  
 anal spine (4) anal spine with 7 H. anal spine brown granular, also  
 anal spine (4) anal spine with 7 H. anal spine brown granular, also  
 anal spine (4) anal spine with 7 H. anal spine brown granular, also

*Balls on Populus grandidentata* Feb 1896  
 U.S. May 31 1896 (Base or all parasites)  
 Social head shed heads, not 1 a dead fly.  
 (4) Hd. 55 length 5.5 mm. Hd. brownish  
 shaded dark blackish brown, a darker  
 patch on head, a pale brownish mark  
 over and above mouth, eye black. Body  
 (discolored) indistinct annulate with short  
 pale setae. The feet moderate colorless  
 and intransigent. The wings on 12, or are  
 they the slight hump on 6-11. No marks  
 cell a low irregular swelling on upper  
 side of leaf, the vein by veins enlarged  
 and tending to curl backward rolling  
 the leaf. Small side them, flat or  
 irregularly raised; above scarcely much  
 thickened but folded up green & yellow  
 an irregular ill defined swelling about 5 mm



Calc.	.20	.29	.41	.59	.84	1.2	not .70
found	.25±	.3	.4	.6	1.0-1.2±		
	.14	.24	.4	.66		1.1	not .6
			7 I				

Habits of 7F but on smooth willow, the dead  
 folded leaves larger on the narrow leaves  
 25-40 mm long and about 1/4 of the leaf  
 folded backward, reaching midrib. Folded  
 part at angle slightly swollen and yellowish  
 evidently caused by little scattered pinkish  
 patches on the under side.  
 Hd. 2 mm. (comes out of eye and eats  
 whole leaf.) Hd. pale brown, looks  
 eye black. The feet rather large  
 colorless, and moderate 6-11 13.  
 Body, translucent green from food  
 and slightly as from food. Anal  
 plate, tubular, rounded, marked  
 with a large deep black sd patch. Points  
 rudimentary, dark. Tracheae as evident.  
 Hd. 3 anal spine short black.  
 on populus - pinkish, horse well  
 formed but leaf not at eye. Hd. shiny  
 dark blackish brown, eye black. Body colorless  
 feet green Hd. 25± Same but small, colorless  
 paler than above, brownish, not black.



71A On *Populus grandidentata* Fort Co. June 7. Same  
but lvs 1.3-1.4, the 2 anal patches small, adjacent  
to the prongs. Shed June 9 Hd 1.6 Same (A. H. H. 14) One down  
June 12 like 71. Hd same 1.3±

whitish, no food in al. canal sitting by egg &  
slit. No prongs yet a good well folded  
larva, the leaf swollen between veins.  
youngest leaf. Egg slit under lower spi-  
derium half way between midrib & margin  
molt June 3 Hd. 4 brown black, paler than before  
Body same but anal end black from feces  
intensified & the sd black patch which  
is now present. Prongs short blunt, black.  
(Emerald blackish shaded on the coarsely annulate  
foot pure, otherwise same. In ground June 4)  
June 5 Hd. 6 pale brown dotted over body & dark  
brown tuberculate patch in eye black. Egg in-  
distinctly annulate rather coarsely & ridged  
showing a T-shaped outline, a transverse ridge  
ridged; tubercles on columns, setae fine pale.  
sd anal black patches preceded by a narrow  
transverse band. anal prongs black. Body greenish  
June 7 Hd 1.0 (sh. hd. 6) *Populus* pale brown, feet black  
anal spots preceded by a pair of sd dots  
late of its rather small.

Out March 31 1897 *Pontania pallidicornis*!

71 in July  
series, *Platylabus*  
Aug. 24 1897

desc with 7Q

7J [See 7Q].

Galls on smooth <sup>light</sup> hairy backed willow at  
San Cataldo Park June 2 1896. Very like  
7G but about equally divided between  
surfaces of leaf, flat or nearly globose  
3½-8 mm diameter but outline more  
uniform about a circle of 7 mm. Smooth  
or with slight hairy dots, green only  
slightly red tinted, less red  
and less curly dotted than 7G



Larva hd. .55 mm, lower ½ white, vertex  
above black eye smoky blackish,  
jaws brown. Body opaque white, rather  
densely finely pilose. Thoracic feet quite  
large, feet 6-11, 13 but small. Anal end  
obliquely sloping, dusky shaded d. on 13.  
No prongs. Can wrack vigorously up & down.  
June 8 Hd. 7 same hd. dotted above. anal end  
round pointed d. view V with a few tiny  
dark spots all body opaque white  
Gall is thin shelled, hard not fleshy  
cut with a sharp knife. Shell .5 mm

June 11 Hd. .83 pale & blackish black in  $\Delta$   
and up from there as well as from eyes  
Red, whitish, obsolete, 3 annulets, tubercles  
slightly shining, setae fine. Head setiferous  
very whitish, no ocellus; feet moderate  
Galls all black, some found in wood unless  
I am mistaken (June 13)

Next one = 7Q

Quit of May 6 1897. Probably *gracilis* but  
smoked up and yellow not clear.

Calc.	.19	.27	.39	.56	.80	1.14	rat. 7
Found		.3	.4	.55	.5		

7K

related to 7I on smooth willow, Vaucluse  
Park, June 1896. Eggs deposited under lower  
epidermis forming a small gall like  
swelling on top of 7H but less pronounced.  
A green lump on upper surface, then a thin  
skin, and swollen but slightly yellowish,  
the leaf rolls over tightly in a close coil  
to ten whole turns for as far as the  
width, from  $\frac{1}{2}$  to the whole side of the  
leaf being involved. Little larva in the  
gall, but soon part of it resting in the rolled  
part. <sup>at 11.4.3</sup> In gall Hd. 3 pale brownish, eye black  
Red all whitish, feet a narrow green line,  
slight shining, annulets, the feet just size.  
In 4 of Hd. 5 full shining black except just  
around mouth where pale & a little pale  
also on antennae. Red shining, no distinct setae  
whatever, tubercles several indistinct, irregular  
4-5 annulets, feet 6-11, 13. Body whitish,  
slight opaque, feet green and whole

Stage 13.40 Hd. & anal flap shiny black. Body whitish, slightly shiny, annulate.

9 seg of anal flap black. Hd anal pump short but evident, black.

Hd. 6 Same tubercle rather distinct on prothorax concolorous. Blackish anal segment above <sup>or 55 (June 7)</sup> bordered by slight dots. Pump black.

Hd. 80 (sh. hd. 55) S-V outline deeply fluted on abd. single on thorax seg. indistinct, 3 annulate. Hd pale on anterior base, a large

A black patch on each lobe and 2 in clypeus, eye also black, annulate base.

Body 3-annulate, smooth, and shiny whitish with slight yellow-green tint.

Foot green, anal end concolorous, no patch at all, pump about as so rudimentary as to be invisible.

Feet 6-11, 13. Setae fine obscure.

June 7 Hd. 8 same body entire green dusky shaded on annulate, slightly emerald, without markings on shed hd.

Traces of pump short, brown tipped. Pump extensive, not eating whole hd.

Went June 22. 1896

See 10D

7L

Sf. for ground supposed to have come off. Hd. hornbeam, England, N.Y. June 7 1896 Feet 6-11, 13; hd. 1.6 ± testaceous, pale, a black patch at vertex eye black. Body all green, hairy on the folds annulate, not shiny; no annules. 4 ± annulate. no setae

Imago June 24 1896

Calc.	.25	.35	.50	.72	1.03	1.47	2.1	7
Found		.33	.50	.75	1.1	1.5	2.1	

7M

Like 2E but no black anal <sup>partly</sup> ~~partly~~ white anal goes to end of the flap.

Old Cornus Greenwood Lake W. J. June 21

1896. Eggs. 3 sides of sides under lower epid.

and from above a short row means 11 to side vein. 1.5 x .6 bulging up leaf, faint yellowish with green central area

Hd 2.1 black gently creasy except eye & mouth. Body <sup>thorax slightly enlarged</sup> coarsely 6-annulate, nearly to short woolly to and including 5th fold: no wrinkles at all; feet 6-13. When fresh on annulets small watery glandular areas.

Hd 1.4 same Hd 1.1 same, food shows more.

Hd 1.1 black, woolly only in a band across between the eyes. Body yellow, well woolly.

Hd 1.5 (multinate) black, yellow below eyes and below. Body shiny on folds & venter ochre yellow, dorsal blue-gray, marked with leader black on annulets 1, 3, 5-6

Ed and on all the annulets laterally being a d. and 5th time of second ann.

marked by annulet 2 and 4. The lower end of this d color is increased before it reaches the upper yellow 5th fold. Feet all pale. Egg hatched by a little hole in blister towards one end. Hd .33 pale brown, eye black. Body curled whitish, opaque, without horns. Food gone in the slightly enlarged thorax, as they have just eaten.

(Hd 1.8 instead of 2.1 when got last stage!)

Hd June 28 & 29 Hd 4+ or rather 5 (second measurement) pale, dark brown over vertex eye black. Body annulate colorless or greenish from food, creasy, woolly. Not much in stage I. Hd 1.5 to 1.7 black. Body same.

And January 1896

*Paraphorona vesicicola* West

More Chain Bridge, Va. June 25-1899  
and June 4 1900 Homocidura n sp

7N.

Curl on back of leaves of jewel weed  
tail in the air in center of curl. Green-  
wood Lake, N.J. June 21 1896. <sup>also rarely</sup> in Central Park  
Head white, with slight blue, eye in a  
shiny black spot, a dusky blackish shade  
in a row fainter geminate one at vertex  
of the gray, obscure, some fine pile. Seps  
nearly flat 7 annulate smooth, gray  
to spiracle 5-8 fold white, overlaid  
by a pretty, gentle bloom, and a usual  
gentle, feet coluber, feet 6-13; anal flap  
white, translucent with 5-8 fold, no marks.  
When wet & masses of, become transparent  
and look reddish green from food. Hd 1.5  
Hd. 6 across but on vertical patch, but all white  
Hd 1.1 faint vertical patch, body white.  
Hd. 3.3 Hd pale, eye black, wd white, annulate, bloom.  
Ultimate June 30 Hd 1.5 whitish, tinged green, eye  
black, no marks. Body immaculate shiny green,  
nearly annulate, faint tawny brown on folds  
cylindrical oval end slightly tapering. In ground

More Chain Bridge Va, June 25-1899  
Ericocampa fulvipes Fitch

70

White long mostly on buttercup, Greenwood  
Lake N.J. June 21 1896. Head large, full at  
the vertex, shining watery mass of colorless  
a little yellowish, some with a streak  
white bloom; eye black, smooth brown  
Body appears dark greenish or blackish  
gray, feet coluber. 5-8 fold has some  
nearly bloom, dorsum covered with long  
tufts of white down. Skin colorless, the  
color from within; tubercle line distinct  
Feet 6-13. Down in long flattened masses  
2 dorsal, 25 d, 3 lateral the post. one lower  
5 d tufts longer than the d. (unpaired).  
May get 5 mm long, & curls a little.  
Hd 1.5 and 1.1 ± Hd 2.1 June 27 Same  
Feet coluber, all dark from food. When under  
convex & deeply, 6-annulate  
Ultimate Stage Hd 2.1 Perfectly smooth uniform  
caramel white (opaque gray pale yellowish) hd  
shiny and a shade darker, eye black. Not  
geminate and indistinct trans. whitish  
dorsal tufts, as high as wide, sharp very little enlarged

Hols. also 1.0, .8 and .6 same, body without  
the dusky bands.

7P = 4F

Very common looking saws, flat on venter on  
young leaves of alder, solitary, do not  
curl though looking as if they might.

Cat holes in the young leaves only at the  
base of the bush in the shady part where  
the leaves are thin and buggy. <sup>Riverside</sup> <sup>July 2</sup>

Hd 1.5 rounded, reddish white, obscurely  
granular; scarcely shiny, a large black  
patch on venter and another on side of  
apex covering the brown ocellus; jaws brown  
Thoracic feet small, abd. 6-13. Legs 6-  
unilinate, not very strongly yet quite  
regularly, a slight depression in middle  
of 2 ant. indicating sd angulation\*

Dull white, thorax greenish, narrow d.  
dorsal sd and narrow substig blackish  
bands. Anal plate small black,  
the 5-8 band (partly) is broken & dotted.  
Stem fine granular (1/2 inch) smooth not  
shiny, \*each marked by a pale dot.

Endeavour = 4F Oud Apr 23 1897 ♂

Call. .24 34 49 .7 1.0

5 .7 1.0

7Q

Galls on willow *Salix petiolata* from Dr.  
Lintoner, Gouverneur N.Y. Galls like  
Marlatt's *Pontania gracilis*, not quite  
full size. Nearly spherical or a little  
slumped in direction of leaf, nearly evenly  
divided by leaf, projecting 1/2 its width  
beyond the little leaf, singly, rarely two,  
situated near base to one side of midrib,  
Smooth, green, a few corky dots; very little  
red black if any. Size 7 to 10 mm (= 7J?)  
Gall thin, large hollow, not at all fleshy  
Larva Hd 1.0 dm pale brown, eye black.

Body whitish, granular with certain  
tubercles on each, slightly shiny, not pilose  
Distinctly a single small pointed blister  
situated tip to anal plate. Pale black on  
water (leaf). 9 vessel present. Length 6 mm  
Anal end pointed with a few dusky dots  
Larva when full without, body all whitish and  
gray. Boad in and

*Pontania gracilis* 7Q

This same as S. abnormis New (5B)

7R = 5B

*Phytophaga leprosa*

*Stenophygaster* on large pointed leaved knotweed  
at St. Riverside Drive, also 99th St and in  
Kew-Forest Park, July 8 1896. Flut on venter  
rarely curled, mostly on under side but  
symmetric on upper. Suggest *S. pinguis* a  
little as s-v ventral is roughened and  
larva sometimes into a little serrate.


Head flattened; feet 6-12. Hd whitish, a  
light gray patch before apex of each lobe,  
a brownish patch in  $\Delta$ , eye black, but can  
be have very slight brown. Segs 6-annulate  
soft deep green to drab, s-v pale  
whitish, contrasting, but not with green  
tint. Very distinct small white points  
on 2<sup>d</sup> & 4<sup>th</sup> annulate 2 on tracheal line and  
on vent s-v fold. s-v folds slight, un-  
plicated. Feet pale. Anal segment green  
like the rest, conspicuous. Larva slender

2 mm wide, 19 mm long; Hd. 1.5, 1.1  
Alternate Hd whitish, a leaden blackish dot on vertex  
Body somewhat green, uniform, annulate, no points.  
Larva in wood.

Calc. .23 .33 .47 .67 .95  $\sqrt{10}$   
.35 .95

7S

Galls on long smooth leaved  
tree willow, Bellport L. I.  
July 8 1896. Galls in all  
stages, not alike as usual!  
Many ones on young leaves to  
old ones with a hole in, even  
some turned brown. See

 Although finding in one  
usually singly, scattered, rarely  
causal or as many as 8 in one leaf, as a  
rule remote from the petiole but near the  
vein or adjoining it. Between the vein and  
margin, rarely reaching edge, never exceeding it.  
Elliptical with irregular surface especially  
below, evenly divided by the leaf, usually  
green below, reddish or even brown & with  
above, often blackish spotted 8x5x6 mm  
Some are very irregular below, grooved on  
one or both sides when crossed by the veinlet  
Thick, succulent and watery rather than  
fleshy, cavity small, elliptical, at

maturity they are hollowed to a shell  
usually. Gall green inside.

Leaf Hd. 35 mm, shiny dusky blackish  
Body uniform bright emerald green, 3 annulate  
minutely setiferous. Anal end slightly tapered,  
rounded. Thor feet large, abd very small.

rudimentary 6-11, all small green like body

Hd from ov. 95 leader blackish, surface of a  
broadly pale, eye black. Body yellowish green,  
darker from ab. canal, ill defined minutely  
3-annulate, ventral setiferous, and distinct  
striae. Anal end blunt rounded, brown

dotted above. Feet rudimentary 6-11. Tracheal  
line evident. Larva eats a hole and pushes out feces  
well before reaching stage of pupa, very  
fall remember this is a part of leaf

The young gall grows up as an elliptical  
swelling, a deep hollow in the center on the  
upper side corresponding to the egg puncture  
or even a hole through leaf. Egg in this  $4\frac{1}{2} \times 2$

to one side of the hole  
gall, .6 x .2 mm irregular elliptical, smaller  
at one end, shiny translucent white.

Small horn comes, one in a pair, another between leaves.

2 spec. Aug 5 1896 *Uridictya Picturaria byalina*

<sup>7T</sup>  
*Pinus rigida*  
Saguaros on pitch pine, 3 mounted at Ballpark

29 July 1896. Hds 2 mm, round, higher  
than wide smooth shiny brown black  
eyes black. Body slightly greenish white  
opaque. A broad regular sd gray shade

line 2-13, rarely a narrow fainter dorsal  
a row of 5 black spots above stig line

resting on tracheae, broken & partially  
truncated by the annulets, 1 spot <sup>annulets 2-4</sup> for seg.

3-12 and a large geminate scaly black  
subanal patch. Subventer white - ventral

marks. Thor feet black, <sup>except at joint</sup> abd 6-13. Pale  
sd shade faint, lat. spots varying present

absent or barely small. Sd band near  
not quite reach 2 and there is often

a little black dot on 3. Segments  
6-annulate, 1, 2 & 3rd annulets with a trans

row of minute black points only seen with  
lens. When blown on hold on by abd.

feet and bleeds up. Thorax all at once



Stage before (found Jul 21, came out = 7T)

3 larvae mixed in with the preceding (7T) as if part of same brood. Hd 1.5" blackish brown shiny. Body greenish white, a little shiny, unannulated except for a faint dusky double subanal cloud. 6-annulate with minute points on 1, 2, 4. The feet black abd 6-13

Ultimate stage. Hd reddish whitish, shaded with black over vertex, eye black, w 2.2 Body dull greenish s-v very yellowish white, a little p. and head tubercle under black shaded bands, cut by the microne. The feet faintly blackish banded. Anal flap broadly wavy.

Emerges Aug 9 1896

Ultimate larva, all yellowish concolorous but concolorous 2 lines, dusky wavy bands on each seg. dorsally. Thorax & 11-12 yellowish.

7U

Emerges on grape, sitting in a row and eating down the leaf like *Harrisina*. Body pink in first stage. Hd shiny black. Body reddish green with black joints. Hd rounded shiny black. Body ended yellowish. Antennae present, the first 3 segments green. Leg shows 5 annulate <sup>on</sup> <sup>the</sup> <sup>base</sup> with a series rather dull. Black spots on purple joints. 2 and 3 above spiracle line below if present, obscure. Feet 6-13

Aug 12 Hds 1.2 Spin. blacker, more distinct. Emerges June 29 1897. Hds. black 5 mm. Body greenish the small joints pale except at the ends.

July 11 Hd 1.2 Flat stage, black. Body greenish, dusky yellow. Thorax and 11-12, 5 black. Thorax-like spin, a 6<sup>th</sup> joint a and joint base of an spin on

each 5 or fold. Could find none even with 1/2 in obj. Green mostly from food, the dorsal with contrasting a little scattered white fat and black. Hds 1-6 same

7V = 6E?

Recalling 6I and 6E but seem not like either, from Mrs Slosson Sept. 15 1896. On elder, Franceville W.H. Upper  $\frac{1}{2}$  head black, lower white. Body 7-annulate, 2<sup>d</sup>, 3<sup>d</sup> with distinct white points. All above spiracles black mottled with solid white forming principally a restored narrow sd line, and straight dorsal. Below spiracles line white with several small black spots on each segment and one on the base of the foot. Anal plate black. Maxilla feet pale with a mark at the base. Two streaks on head pale at post edge of occiput. Head smooth on front showing very thin black seam but folds, about dotted the creases of annule pale a lance look much less than 6E. 11th pale, yellow a dusky shade on vertex. Head smooth. Oct May 1 1897 Macrophysa trisyllaba Say

Oct May 4 1897 ♂ = Tenthredopsis atris-lacuna not exactly except 2 joint antennae  $\frac{1}{2}$  longer than 4th and no spot on post. coxae.

7W

On elder from Mrs Slosson, Franceville W.H. Sept. 15 1896. Looks a little flattened but thick & robust, feet 6-13. Head round dull black, with 1.4 mm. legs 7-annulate. Whole body soft dark gray to ground margins. Pouch produced into short papillae 2 pairs, one on each annulet in a sd and lat. even regular row, and other smaller ones scattered s-v. In row ① which is shorter, 1st & 2<sup>nd</sup> orange 2<sup>nd</sup>-4<sup>th</sup> black 5<sup>th</sup> 6<sup>th</sup> orange, 7<sup>th</sup> black; in ② which is longer 1<sup>st</sup>-4<sup>th</sup> orange 5<sup>th</sup>-7<sup>th</sup> black; 2 post spiracle & 2 s-v post. pale orange; 2 groups of 6-8 very small ones on upper and lower s-v folds whitish. Sides with a number of small black spots. Anteriorly there are less of the papillae but the alternation in color is similar. Anal plate not differentiated. Sept 15 smooth very shiny all over dark plate, two stalks, papillae indented & one small crenellum joint. The feet pale

7X

On black oak, Franconia NH from Wm  
 Slusser Sept 15 1896. Recalls 7A and 6F  
 but is spotted. Can curl: feet 6-13, the  
 thoracic long head large, bright reddish  
 above upper part, eye small black;  
 pale below. Body feet all columnar  
 columnar, a shaded orange red spot  
 6-14, a row of small dark black  
 spots over thorax and along lower  
 lateral region. Segs 7-annulate. Small  
 flat, with wavy edge  
 (will not eat oak from Riverside Park (NH))

7Y

Probably = *Neuroterus conigli* but not sure,  
 because on top hemlock. Fort Lee  
 N.J. - Sept. 16, 1896.  
 Not striking black, 1.8 mm slender larva  
 black dotted on dotted ground, smooth broad  
 feet 6-11, no glands excited. Segs coarse  
 annulate with small dark spots,  
 color dull green spiracles with faint  
 discolor yellow blotches. Small  
 region shaded with black, streaked on  
 annulate and not forming a distinct  
 regular edge, and complete tendency to  
 break into 1.5th heads. 25 or folds,  
 a spot below spiracle & above base of  
 leg black. The feet pale. Venter also  
 pale.

Ent May 26 1897 | *Pteronix n. sp*

Diodictyon subgagaminis nsp

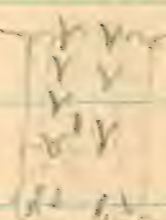
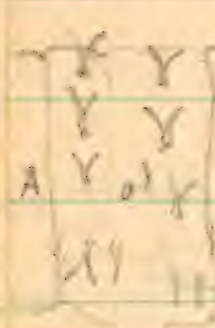
8A Q. prinus (?)

Collected to E and 7B on rock oak, Polham Manor N.Y. May 18 1897.

Head .8 mm green with a large black patch on each side and one in clypeus. Y-spin all short, all black except those on s-v folds which are pale. Feet pale, no other marks. None puparium than several on a leaf when there were any at all.

May 19 Hds 1, 2 just the same, patch in clypeus double. Spin. black, distinct pale s-v. shafts Y-5 very short, links warning divergent, tapering X. (arrangement evident)

May 21 Hds 1, 2 Same. Seps 5-annulate spin on 2<sup>d</sup> and 4<sup>th</sup>, spinach on 2<sup>d</sup> in 3<sup>rd</sup>; three fin setae below spin on s-v fold also black. Y-spin spinulose  $\frac{1}{2}$  in, sly skin finely spinose getting large. May 23, 16 mm long



short spin on s-v fold, sgs 5 annulate 1st and 2<sup>d</sup> spin on 2<sup>d</sup> annulet. Uniform green from blood, a little whitish, dorsal forming indistinct paired streaks in center of each seg. Radial hair distinct.

[Found on white oak and black oak at Brown Park May 22 1897. Subgagaminis punctum are alone. Just the same, head same, spin as in figure. In one the spin had rather broad black bases]

May 25 (ultimata) found, entirely green, s-v black, annulet brown. Hds 1, 2 shiny, waxy, space of spin indicated by waxy dots.

More Brookhaven, L.I. June 6, 1897 Hds 1, 2 in  
more of same June 7 " Hds 1, 2 "

Spin on 2 all black on ant. annulet. One seen just hatching. Y-spin on shaft, and a pair spin from skin. More collected L.I. Hds 1, 2 June 10. just scattering spin very small but well fed.

Cent March 25 1898

8B

On black oak (*Q. palustris*?) Bump Park  
May 22 1897. All green from blood, legs  
and head paler; eye black, antennae  
brown no marks. Hds. 1.4, .7, 1.0 mm

specimen as in 8A, no trace of  
black. Body a little whitish  
from diffuse fat. In the  
small one some of the spiracles  
are trifid. (Both would not  
eat and died)

Another <sup>*Puccinia*</sup> Black oak Newshaven & I June 7  
1897. Hd. .7 mm. Shed June 11 Hd 1.0

2 more on *Q. tinctoria* Hds 1.4 all green. In one all  
but 1 and in other all the normally 4 spiracles  
were trifid. Yellow fat granules all over the  
sides, making d. vesical contrast.

June 18 ultimate. Smooth pale yellowish green, the  
anal end black, water areas for 4's. Slightly  
shiny, acuminate; hd 1.3 mm

Out Apr 11 1898

When least just hatched an  
oval white egg sawed in  
from under side by an elliptical  
cut below of depth, an incision  
from junction (within) which of  
the leaf from the egg, one enlarges  
by withered part of leaf, bearing  
slight stem and rounded to  
a slight circular ring. This ring  
ring later thickens faster than  
the central part, forming the  
irregularity of the gall.  
all steps in the growth  
by gaps so few young leaves  
these young galls are developed  
now and can be seen on the white  
tree willows

22 1897  
more  
vesical  
that  
hds.  
young.  
a.  
1 spiracle  
5-8 fold  
very  
Red-  
ed.

8B

On black oak (*Q. palustris*?) Bronx Park  
May 22 1897. all green from blood, spine  
and head pale; eye black, mouth  
brown in mouth. Hds, 1.4, .7, 1.0 mm

Spinous as in 8A, no trace of  
black. Body a little whitish  
from diffuse fat. In the  
small one some of the spines  
are trifid. (Both would not  
eat and died)

Another <sup>*Q. coccinea*</sup> Black oak Newburgh June 7  
1897. Hd. 7 mm. Shed June 11 Hd 1.0

2 more on *Q. tinctoria* Hds 1.4 all green. In one all  
cut @ and in other all the normally Y spine  
were trifid. Yellow fat granules all over the  
sides, making d. vessel contrast.

June 18 ultimate. Smooth pale yellowish green, the  
anal end black, water area for Y-S. Slipper  
shiny, annulate; hd 1.3 mm

Out Apr 11 1898

8C = 7E

On black oak Bronx Park N.Y. May 22 1897

Just like 7E but spines more  
Y-S. Light green, dorsal vessel  
dark, head, spine whitish.  
Eye black, jaws brown. W. hds.

1.3, 1, .7, 1.4. Some (\*\*) has only one prong  
on some segments of caudal lumen.

(For coloration copy 7E) In two 2<sup>nd</sup> spine  
of caudal was trifid and 9 upper 5 or 6

One shed and came out this way  
at least on some segs.

A big one 14 1/2 mm. long hd 1.4 at Bed-  
ford Park, May 25 1897. Well Y-ed.  
also some little ones.

Out March 27 1898

When leaves just unrolled an  
oblong reddish egg showed in  
from under side by an elliptical  
cut below apex, an incu-  
sion puncture (center) white egg.

The leaf from this egg, once enlarged  
by natural growth of leaf, became  
slightly thickened & rounded to  
a large circular ring. This red  
ring later thickened faster than  
the central portion, from the  
irregularity of the gird.

All stages are very short  
by which so few young come from  
these hairy galls and which covered  
the willows in the white-barked  
tree willows.

Will you drop in and see me sometime  
when convenient soon?

Prudden.



8D

Solitary in lichen, Berry Park, N.Y.  
 May 22 1897. Flat on white,  
 feet 5-12, 13, ant straight.  
 Hd. 1.4 whitish with green  
 tints, eye black, mouth brown.  
 Seps flat 5-annulate, smooth, but a  
 few <sup>(six)</sup> spines on anal flap and trace on  
 s-r feet show it to be a *Blennocarpid*  
 Green, a little whitish, opaque closely  
 from fat in dense patches, even partly  
 obscuring the d-vein by a few granules.  
 Below transverse line scarcely any fat, the  
 s-r folds rather well marked, the feet  
 not long, abdominal distinct. Under  $\frac{1}{2}$   
 inch obj. very rudimentary joints seen (as  
 reported in fig.) apparently only 2 on anal  
 anal, but not sure. Think <sup>find normal</sup> ~~very~~ <sup>discontinuous</sup>  
 May 28 (ultimate) Perfect smooth shiny  
 pale green, warts folded. Hd greenish white  
 eye black.

Bellport Head June 7 Hd 1.4 from dorsal black slender  
 d. spine except on ends (2, 3, 12, 13) reduced to short  
 15, 16 spin or black <sup>structure</sup>. Spine on anal annulet  
 2 colorless <sup>purple</sup> <sup>resp</sup> <sup>very</sup> <sup>great</sup>, <sup>flung</sup> <sup>at</sup> <sup>with</sup> <sup>spine</sup> <sup>in</sup> <sup>the</sup> <sup>pale</sup> <sup>parts</sup>  
 ant March 24 1898 8 E

Mixed with 8A but differentiated a molting  
 on white oak. Dorsum to spi-  
 acles obscure blackish with  
 black spots. 2 ant, s-r spine  
 and feet pale greenish white  
 with colorless spines. Spines on anal  
 plate black. All d-s-r spine with  
 pale tips. Hd pale in outline and face,  
 lobes broadly black and a thin spot  
 in clypeus. Mouth brown on 1-2 &  
 3rd spine and anal, on 3rd very obscure.  
 As per dorsal color feet to a head purple  
 Emptying May 28, shiny jacket in P.M.  
 Smooth, folded annulate, warty, warts for  
 tubercles translucent very greenish white  
 pieces in throat, dorsal <sup>often blue pen</sup> <sup>dark</sup> <sup>red</sup> <sup>dark</sup>  
 no purple shade <sup>hd 6 black feet not open 2 deep green</sup> <sup>hd 4 black feet not open 2 deep green</sup>  
 June 5 1897  
 Another Bellport 2 white oak, solitary  
 Hd 1.0 mm just the same but black warts  
 on head all tubercles. 4 black spines with  
 pale tips for limbs. Dorsum faintly shaded  
 Another White oak Northaven June 6

8F

Little Blennocampids solitary on the back of young leaves at the end of the fresh shoot of the *Garry oak* ~~but not common~~. ~~near all gone but found two still left May 25 1897.~~ Bedford Park, N.Y. Hd pale green, a rounded patch on each lobe outwardly, a double spot on eye black; w. 8 um. Body all green without marks, rather distinctly 5 annulet marking with the several pale spines. Eat round holes as usual.

Shed May 26 Hds 1 um. just the same  
 Shed May 28 Hd 1.3 All green eye black a trace of a rounded dusky patch on each lobe. Hd same green, spines pale. (Hd just shed; later all black spots came on hd and legs all as before)

June 4 (during jacket) 5 smooth, shiny, rather distinctly 9 annulate, waxy areas for spines. All green, eye black. Hd 1.3 um

\* slightly wrinkly annulate, no marks, no hairy shades. Hd 1.6 as high as wide, hives robust. 2. vessel present. July 12 12 um  
 Some, if not all, laid in rotten wood. One open a good time from between G leaves, dusky, not greenish

Solitary, sitting on upper side of large *Quercus* leaf during black oak, Bedford L.I. June 5 1897. Hd 1.8, all shiny black except mouth and a small arcuate line above  $\Delta$  which are greenish. Y. spines as in E "1896", quite large and strongly pinnate, all black even the last on 3<sup>d</sup> annulet and the ant of upper 5-8 fold blackish, <sup>and ant. of 2</sup> lower 5-8 spine pale. Body translucent, green, indistinctly annulate. Feet 6-13

Shed June 5 Hd 1.4 (Hd 1.05) Same Y-S long dusky tapering, as long or longer than shaft S-X spine pale except mid. upper 5-8 which is black at base in some segs. Eat holes and holes to partially high. Sit on upper side.

Another same but pale shade surrounds  $\Delta$ , lower spine of 4<sup>th</sup> annulet only partly black. Black spines all black, large. Perfectly solitary, only one on a tree. Sit on upper side and eat up all one leaf.

Other *Sarcophaga* June 6 Several together - same. Hd 1.0  
 Hd III Same species but smaller  
 Small jacket June 8 Not smooth tubercles represented by small dark cones not shiny, all very light  
 white green very much whiter than feeding stage

Shed June 29 1897

Calc	.38	.55	.78	1.12	1.6	Lat. 70
Found	.4	.6	.8	1.15	1.6	

8 H

June 4 1897

Solitary edge cater on large smooth black oak, "Richardia Hole", Belleport, I. I. Feet 6-11, 15 small slender, used, thoracic joint size. Legs irregularly wrinkly, 6 annulate, last annulet very narrow, the others subequal. Anal plate rounded, slightly cordately notched, no visible prongs.

Hd. 8 mm rounded whitish, eye black, a dark shade of behind eye. Body translucent sodid green, no wrinkles but black patches at bases of thoracic feet. Spiracles blackish <sup>another 1.15</sup>

Hd 1.2 Same. Dorsal dark above, behind eye small. Anal plate projecting, truncate concave. No prongs. Translucent whitish green, mainly at base the feet.

Hd 1.4 Same but larger, clearer green, incisions folded, annulet crescent grooves, tracheae evident. Hd green eye black, mouth brown wrinkles at bases of thoracic feet clouded, small. Anal plate truncate.

Cont Apr. 7 1898

*Nematus chloricus* Wnt

slightly cordate notched, no prongs. A little green fat in 15. Head does not show, dorsal vessel obscure. Head shape same, dull; body also dull. The feet colorless. No setae  $\frac{1}{2}$  inch obj. Another Hd 1.5 Same, not felled out. The black mark in form from head. Another 1.6 same, large, trace of black on thorax. Body yellowish faintly sd from the obscure fat granules. Spiracles dusky. On young leaf Hd .6 whitish, dull, eye black, ventral shade behind it nearly to apex. Body rather finely annulate, whitish, only green from feet, bases of the feet black marked. Anal plate truncate, concave, the posterior rim edged with dusky. June Hd. 53 Same, a blackish shade above. Egg slit on edge of leaf just before point of apex. No long 5 deep annulet, semicircular, yellowish. One in the stage but the head on leaf. Hd. Same. The down June 6. Slightly shiny. Another Hd 4. Judged whitish, eye black a dusky shade behind and over. Body whitish translucent green from feet, smooth, slender curved annulate feet 6-12 of ventral elevation as in setae. Black marks on the feet, all as in next stage.

8I

*G. coccinea*  
 On smooth large black oak Belleport L. I.  
 June 6, 1897. Sardinia Road. Large solitary  
 slightly curling Tentredo allied to 7A  
 Hd. 1.8 pale red brown, eye narrow black  
 mouth darker brown. Feet 6-13, under  
 segs. regularly distinctly 6-annulate.  
 Color translucent fleshy brown, a lateral  
 row of irregular black spots on annulets  
 1 (small) 2-3 (large), 4-5 (rather small), the large  
 one broken on some segs.; all absent on 13, anal  
 plate immaculate. Spiracle on 2<sup>nd</sup> annulet  
 some tiny black spots around it; a dis-  
 tinct black patch on ant. 5-v. fold and  
 smaller one on post. Feet and venter  
 immaculate. Black mark at base the feet  
 dorsal vessel and paired dots on annulets  
 dusky translucent. Another Hd 1.8 same

erupted & walked June 7 [Can 17]  
 [one got rolled up in my pocket and smelt very  
 strongly like sweet persimmon] Ret down June 9

Clear March 28 1898 *Hemichrosia allidorsata*  
 not

Same jacket Hd. 8 all pale pinkish purple, tarry  
 checked, no annulets. Hd pale too. June 7. Same  
 same at ends, tubercle water, head tarry Hd 1.1

8J

On pig nut bushory Brookhaven L. I. June  
 6, 1897 Several together sitting flat on  
 venter and eating whole leaf from apex.  
 Recall *Aenobolus*. No abd. feet, but  
 a terminal sucker. Thoracic feet spreading  
 Thorax enlarged, body tapering flexible.  
 Ant. 8, 1.1 round shiny black. The feet  
 black. Body dull pale purplish changing  
 to an orange tint on thorax and 12-13  
 heavily black spotted. Spot on 4 discrete  
 annulets, on 1 2 dots, on 2 (spiracle), 3 and 4  
 a series of 4 or 5 dots all soldered into bars  
 and the three bars confluent forming one  
 large irregular quadrate patch; a large  
 cordate spot behind spiracle, a spot on ant.  
 upper s-v fold and a curious very shaped  
 pale centered one on lower fold, below it  
 two dots and several fine dots ventrally.  
 Small black setae on the spots. Spots on  
 13 united in a large patch.

Ardis infrequens var

8K gatta

Blechnocampid on white oak Bunkhara  
L.S. June 7 1897. Spin 3 on 2<sup>nd</sup> annulet.  
Head immaculate, eye black. Body  
green, d. vessel darker; spines moderate  
Y<sup>ed</sup>, normal, pale except 2, 3, 12, 13  
which have black limbs and ① the  
whole length is touched with black at  
base of limb of Y leaving apex and  
shaft pale. Feet pale. Hd. 1.3 mm  
<sup>(Sh. Ld 1.1)</sup>  
shed June 9 Hd 1.6 green, eye black narrow  
Spines all pale except the black  
patches at base of limbs at end of  
body as before. Body green faintly  
Another Belpat, white oak June 10. Hd 1.5 ±  
Another (ultimate) Hd 1.6 slightly brown, ca. and  
tinted eye black. Body smooth green, waxy  
areas for spines, indistinctly annulate; wings  
d. vessel dark.

Another had limbs and of 4 d. Spine black the  
whole length. Hd. 1.6

Out

8L

gatta

Blechnocampid solitary on white oak  
Mapbank L.S. June 7 1897. 2 spines on  
second annulet. Hd. black except pale  
mouth and streak above Δ. Body green  
spines moderate, Y<sup>ed</sup>, all black  
including limbs and shaft and  
both the spines on ant. annulet of 2  
and as far down as ant Y<sup>ed</sup> subventral  
which is not fully black. Like 8G  
but on white oak and ordinary looking  
not robust and tip Y<sup>ed</sup>

Hd 1.4 (sh. hd 1.0) by shading a pale spot  
at apex of shaft so that not base and limbs  
black. ant. spine <sup>on 2</sup> and ③ 4 annulet. more largely  
pale. Another Bunkhara June 12, pale spot at  
base of Y's. reticulate green of whitish green round  
waxy knots for Y's rather distinct whitish green  
indistinctly annulate, d. vessel dark. Hd. June 14

Out Apr 15 1898

Can't tell fly from 8G

59 Oct April 14, 1898

*Pteronus quercus* MacLatt  
8M

Like 8H but on white oak; edge eating  
nematid. Hd round, eye black, a very  
faint posterior dark shade, w. of m  
whitish, andid, scarcely caramel tinted.  
Roof colorless translucent, dirty from food,  
incision folded. Segs. obscurely 4-annulate  
smooth. Anal plate concave truncate  
as in 8H, no prongs. Large black spot  
at base of colulus. Thoracic feet. abd  
6-11. Tarsus white.

July 11 Hd 1.3 Colulus, faintly yellowish, eye  
black under lens a trace of brown line behind  
it, looking internal. Body very andid from  
food which is green only in thorax, colulus  
transparent, tarsi & folds a mixture  
white. Anal plate as before.

Two specimens cocooned June 15. Another had  
1.5 distinct black shaded line from behind ocellus  
to vertex. Roof andid greenish, annulate dull  
incision folded, incision of annulate shiny. Black  
at base of thor. feet. Not so green as 8H otherwise  
no difference. Often a black shade on first two an-  
nulets of 2. Black a band in last stage.

Coeloptera

*Prionomerus*

*calceatus* Say

(E. A. Schwarz)  
1899

8N

Saw cut in back of mid rib of Sassafras  
leaf, Brookhaven 29 June 11 1897. Set  
1 to back of leaf in center of midrib, 6  
cut. distant about their own length = .6 m  
Pass in and also somewhat forward (toward apex)  
from these cuts a blotchy brown mine spread,  
branch, 5 larvae in one, 2 in the other, mining  
toward apex leaf June 15 - 9 mm long in both bundles  
that with the main larvae 3 mm wide, other 1 mm  
wide under lower epidermis. String of cast skins  
from like beetle. Larvae flat, colulus, lvs. 3 ±  
more mine of 1/2 leaf, irregular, the surfaces wide  
apart. Larvae white opaque anagropis no  
feet, string of frass adhering to long exserted  
anal tube. Head feet retracted, feet, brown  
lobes, 5 and labium distinct, short antennae  
no ocelli seen.

Cocoon in the mine, spherical like large  
short pegarisms, clothed in the hair like  
frass strings, thin of reticulate brownish web.  
Cut June 29 1897 Little black weevils

80

Perhaps 8H or 8M but on *Q. tinctoria* not common, rarer even than either, Burklehaver L. J., (taken June 7). Hd 1.6 reddish greenish with a heavy <sup>black</sup> shade up each side behind eye, a dotted cloud on vertex, the entire face. Body green, like 8H, not very reddish nor too transparent, black marks at base of legs. Legs irregularly 6-annulate, bringing spiracle on 3<sup>rd</sup> annulet, perhaps the extra fold due to this very fat larva (annulets 5-annulate). No other marks, anal plate as on 8H. Tracheal line visible. Differ from 8H only in having bend marked in head stage.

Oct Apr 18 1898 *Pteronix integer*

8P. Shed July 26 Hds 2.5. Same slightly premature later d. to spiracle black, head greenish centrally d. faint on 2 ant. & before black anal plate. Feet all white, black patch on lower or folds. 7-annulate mouth, no point.

Shed Aug 7 (swim jacket) Hd 2.4 all faded away quite a shiny. a d. darker band and broken lateral one. Eye black. mouth 7 annulate, smooth

8P

Tentredo? on birch, Bronx Park N.Y. July 2 1897. Feet 6-13 can curl. Hd .9 pale testaceous, a little darker on vertex, a large black spot on eye. Body tapering just, finely annulate, ground glass white, no marks, the dorsum appearing green from the food. The feet colorless.

Shed July 4 Hd 1.2 whitest, eye black, a dark shaded spot on vertex. Thorax enlarged, body white finely 7 annulate, the dorsum green from food.

July 14 Hds 1.6 whitest, eye a large black spot a large amorphous black patch on vertex. Body all opaque white, 7 annulate mouth, food green, no marks. Curled with tail on back (Another Burklehaver on birch, July 15)

Shed July 20 Hd 2.1 white shiny, a large black patch over eye, much behind, reddish greyish black patch on vertex, fine white annulations. Body white a d. and sd head olive blackish above bands 2-13. Anal plate black. Feet all white 6-13. Hd mouth annulate.

Oct Apr 22 1898 *Macrophysa externa* (from)

8Q

Lyda on black oak (*Q. coccinea*) Brookhaven

N. Y. July 10, 1897. Rolls of a cornucopia

on side of leaf with gummy web. Solitary

Hd <sup>1.2</sup> rounded, very pale brown shiny; eye black;

antennae minutely ringed with black-brown

and pale. Body whitish green, annulate,

with a double transverse <sup>obscure</sup> blackish line.

A bright yellowish tint over  $\sigma$ . Feet, anal

plate and cerci concolorous with body.

July 14 Hd <sup>(sh hd 1.6)</sup> 1.7 Water green, coming from a large

yellowish white patch on the face above mouth

from pale outward, a black dot at base; eye

black narrowly; antennae finely black ringed

Body greenish  $\sigma$ , lat, ventral white bands.

with 2 black narrow lines; feet, anal

plate, double <sup>raised</sup> line and cerci whitish.

July 18 Hd 1.8 Same. White line distinct near

ant end, centrally; venter even of white and

green. No dark base jaws but brown line. No dark

marks except faint blackish line each edge  $\sigma$



